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Vol. CX.

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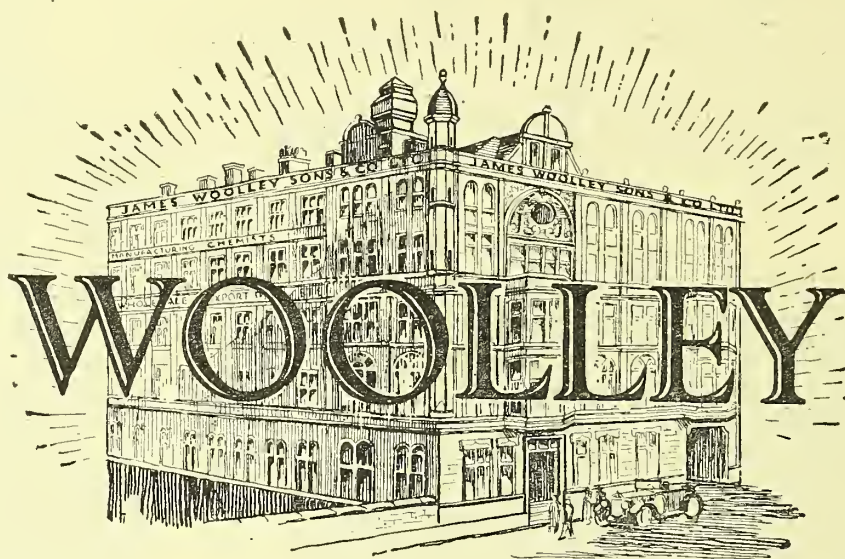


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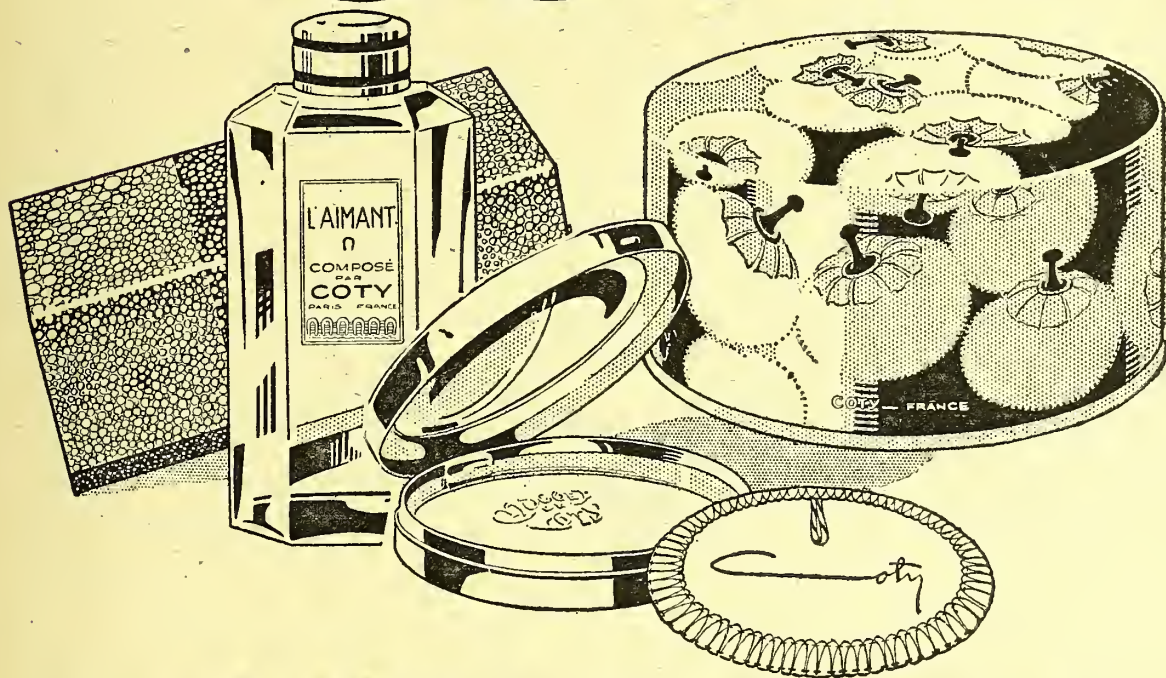
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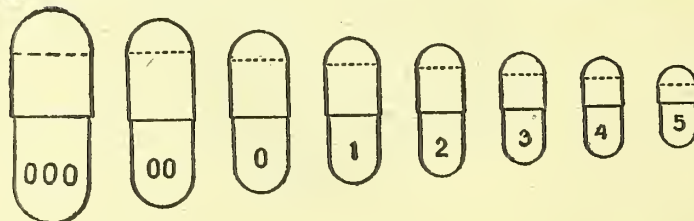
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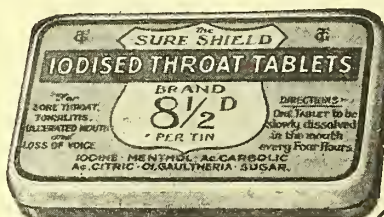
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PRIZE**

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TWO SIZES

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OF
ONE GROSS
OF
NEW MIX**

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Maw's Page



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"VANITOR" Combs will help you to simplify your stocks, and your stock-keeping, to improve your displays, to increase your sales and profits, and to secure future business.

"VANITOR" Combs are supplied to you with two attractive display cases. One shows the range of patterns of ordinary toilet combs, the other the range for bobbed and shingled hair. Arrangements are provided with each case for convenient stocking.

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If there is no Rexall Agency in your district, and you would like to know *why* Rexall selling methods are proving so very successful,

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UNITED DRUG CO. LTD.
NOTTINGHAM



HAWLEY'S I.K.

Is entirely non-poisonous, therefore safe.

Has no offensive odour and won't stain.

By using the I.K. Bellows every nook and cranny can be reached.

It is the most deadly of all insecticides.

Gives over 70% profit.

£5 order secures 5% discount and 13 to the dozen.

Evans'

EVANS SONS LESCHER & WEBB, LTD.
LIVERPOOL & LONDON



**Where brilliant
& plentiful light
without glare is
wanted, use
"Cosmos" Pearl
Lamps.**

**Ask your
Supplier for
them by name
—they are
made by
MET-VICK**

METRO-VICK SUPPLIES (Proprietors: Associate & Electrical Industries, Ltd.)
Metro-Vick Hse., 155 Charing Cross Rd., London, W.C.2

Reduce your 'overheads' with Auto-Dore

Cut down your selling costs by installing Auto-Dore, the most successful method of Automatic vending.

Auto-Dore sells by day and night articles of widely different shapes, sizes and prices. Each product is attractively displayed in its own illuminated cupboard, protected behind glass and obtained by pressing the requisite coin in the slot. No trouble, no delay, no mistakes.

Auto-Dore continues selling when your shop is closed, making extra profits by supplying emergency needs at night, while acting as a striking advertisement for your business.

The convenience of the Auto-Dore service is appreciated by shoppers and its profitable possibilities are apparent wherever it is installed.

Send for full information and particulars of the simple hire-maintenance plan to-day.

INSTAL AUTO- DORE

The Automatic Salesman



**We can give
PROMPT
DELIVERY.**

Offices and Showrooms
**AUTO-DORE,
Ltd.,**
Roxburghe House,
273-287 Regent St.,
London . . W.1.

Corn Remedies



Samples sent to any Trading Chemist. Special prices for larger quantities.

Liquid

- | | | |
|--|----------|-----|
| "Golden" Corn Cure. 2 dr. actinic green vials, felt padded cork, slide box, wrapped. Display outer | per doz. | 4/9 |
| "Dispello" Corn Cure. As illustrated. Effective display and big seller | per doz. | 5/- |
| Corn Paint. Box top cork with brush. Carded in 1 dozens | per doz. | 3/9 |
| Corn Solvent "Eradico." Box top cork with brush, in round boxes, twelve on a card | per doz. | 5/- |

Salve

- | | | |
|--|----------|-----|
| "Eradico" Corn Salve. In silicated boxes | per doz. | 5/- |
|--|----------|-----|

Plasters

- | | | | | |
|------------------------|--|------------|----------|-----|
| Corn Silk "Eradico." | } As illustrated. Alternative styles in smartly designed envelopes, packed 3 dozen in counter outer. | 6 dozen at | per doz. | 3/6 |
| Corn Silk "American." | | | | |
| Corn Velvet "Eradico." | | | | |
| Corn Discs "Eradico." | In envelopes with fixers. 1 dozen in hinge lid box. | 6 dozen at | per doz. | 3/6 |
| Corn Discs "Toto." | Assorted sizes mounted on pocket folder and enclosed in envelope. 12 on sales card | | per doz. | 4/- |
| Corn Strap Rings. | Slide box of attractive design, containing 6 strap rings | | per doz. | 6/6 |

Own name facilities on all except "DISPELLO" and CORN SALVE.

Start early—the sale is amazing

AYRTON, SAUNDERS & CO., LTD., LIVERPOOL

PRINTING

by

Alf. Harrison & Sons, Ltd.

LABELS, ENVELOPES, CARTONS AND EVERY
KIND OF PRINTING IN USE BY PHARMACISTS
:: :: SAMPLES AND QUOTATIONS FREE :: ::

ALF. HARRISON & SONS, LTD.
BURLEY ROAD, LEEDS.

LONDON OFFICE:

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DUBLIN OFFICE:

Harwood Bros. Ltd.
1 Beresford Place,
Dublin.

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Harwood Bros. (Belfast) Ltd.
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COMPLETE SET OF SAMPLES SENT TO THE COLONIES ON RECEIPT OF P.O. 10/6, WHICH IS CREDITED ON A £5 ORDER.

RIVISTA ITALIANA DELLE ESSENZE E PROFUMI

(Affiliated to the Technical Press Association.)

Official Organ of the Group of Producers of Aromatic
Substances of the National Fascist Federation of Chemical
and Allied Industries.

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Editorial Offices : - VIA S. VINCENZO N.38 MILAN.

Telephone : 31 216-C.P.850.

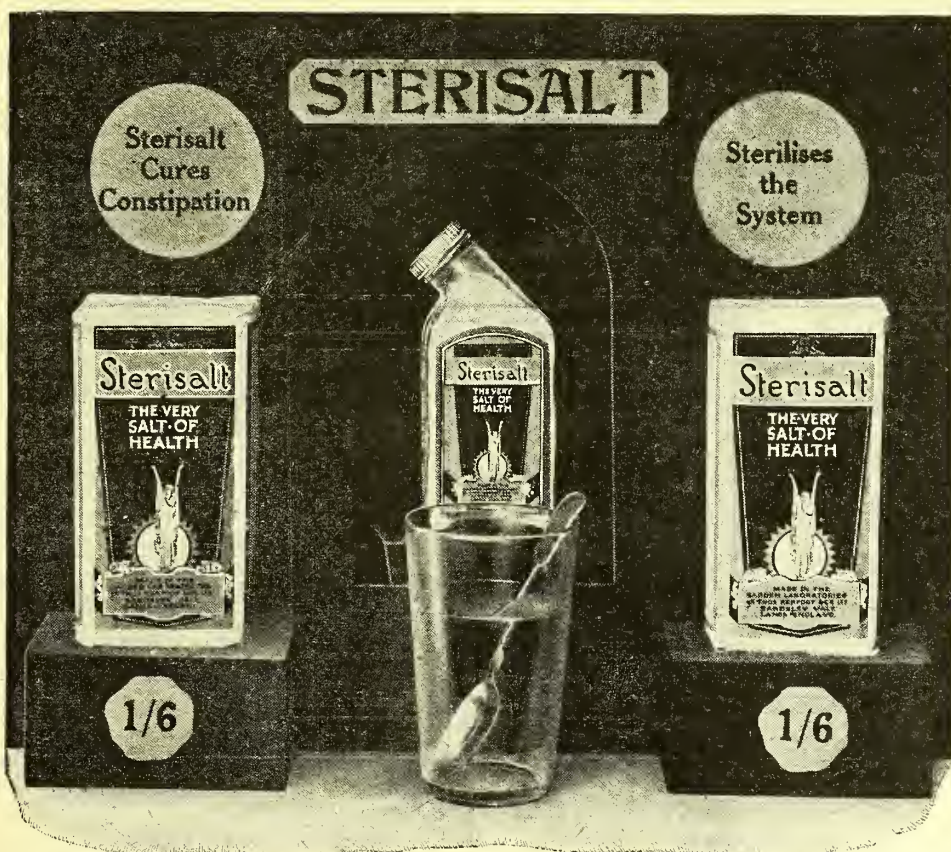
Producers of Aromatic Substances for Perfumery—Manu-
facturers of Articles used in the Perfumery Trade—This is
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MAKE USE OF ITS ADVANTAGES

SAMPLE COPY AND TARIFF ON REQUEST.

"STERISALT" for Constipation

CONSTIPATION is such a common disorder that the opportunities for recommending "something for it" are very frequent. "Sterisalt" is the ideal "something" and you cannot go wrong in commending it to your customers. Free from sugar and therefore excellent for diabetics and others to whom sugar is objectionable. Contains no purgative mineral salts. The small granules pour easily, effervesce briskly and produce a bright sparkling solution. Note the distinctive and convenient shape of the bottles which are now issued in two sizes retailing at 1/6 and 2/6.



To EXPORT BUYERS—All orders and enquiries should be addressed to our Sole Export Agents, Wm. ALFRED JONES Ltd., West India House, Liverpool.

THOMAS KERFOOT & CO. LTD.
BARDSLEY VALE, LANCASHIRE,
& Bardsley House, London, N.1
ESTABLISHED 1797.

D/86

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MOHAWK BRAND OIL PEPPERMINT

IT IS OUR AIM to keep MOHAWK BRAND in its present eminence as the highest standard of Peppermint Oil. Unsurpassed purity and delicacy of flavour.

Single or Redistilled qualities in 28-lb. tins or 20-lb. tins. Smaller packages if desired.

For samples and quotations, spot or forward, please apply to sole agents for Great Britain and Ireland:

**The Old Strand Chemical and Drug Co.
LIMITED**

41 Great Tower St. (22 Beer Lane), London, E.C.3

Telephone: Royal 6737 (2 lines).

MAGNUS, MABEE & REYNARD, INC. NEW YORK U.S.A.

NEROLI & ORANGE FLOWER PRODUCTS

Our complete range of Artificials will allow a cheap replacement in many formulas, which will become necessary owing to the advance in price of the naturals, due to the severe weather having had disastrous effects on the trees.

NEROLI SUPREME

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NEROLI SUPERIOR

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ORANGE BLOSSOMS 1244

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AURANOL FLORA (Orange blossoms novelty)

FLEURANGEOLE 1396 } New bases for

FLEURANGEOL S 1397 } Orange Blossoms.

A range of Samples and Prices on application.

CHAS. ZIMMERMANN & CO. (Chemicals), LTD.
St. Mary-at-Hill, London, E.C.3.

Sunshine

Remedies

including the now famous

**ANTI-ACID TABLETS
"TOXINICON"**

for Rheumatic diseases

GOLDEN-RAY

SHAVING SOAP

the only soap with an Antiseptic Vaseline centre.

**SOLEIL D'OR PERFUME
AND TOILET PREPARATIONS**

WRITE FOR DESCRIPTIVE BOOKLET

Sunshine Remedies Ltd.

8 West Halkin Street, S.W.1

Telephone: Sloane 4133.

LONDON CHEMISTS ARE INVITED TO SEND THEIR "SUNRAY" PATIENTS TO OUR PRIVATE ROOMS. TRAINED STAFF IN ATTENDANCE.

Write for particulars

MADE IN SCOTLAND

H.B.T.

ASEPTIC TOILET & SHAVING SOAPS

The New Health and Healing Soaps

Made with the Expressed Juices of Living Plants
Cleansing—Healing—Refreshing

It would take a whole issue of the CHEMIST AND DRUGGIST to contain the favourable reports of delighted users, but we will just repeat what three Chemists have said:

"I am quite convinced that these Soaps are superior to any Soaps on the market to-day."

"I have myself used your Shaving Soap and in every way it is excellent."

"For quality and results—the most remarkable Soaps I have ever handled."

Now we are repeating our offer to all Chemists and Druggists. To enable you to acquaint yourselves with the sterling qualities of these Soaps we will send you on request, free, one Tablet Toilet Soap and one Stick Shaving Soap, on condition that you personally use them. We are quite certain of your appreciation.

H.B.T. ASEPTIC TOILET SOAP - 9d.

Box of 3 Tablets **2/3**

H.B.T. ASEPTIC SHAVING SOAP - 1/-

These Soaps can be obtained through any Wholesale House in the country or direct from—

HUNTER BEATTIE, 25 Monteith Row, Glasgow, S.E.

Note the British Commercial Monomark on each Tablet—B.C.M./H.B.T.

SEE THAT YOU GET MYSORE GOVERNMENT SANDALWOOD OIL

DISTILLED FROM SANTALUM ALBUM, LINN.

THIS IS YOUR  GUARANTEE

Send all enquiries to :

Telegrams :

"Ekdam," Phone,
London.

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98 Great Tower St., E.C.3

Telephone :

Royal 4987

There's nothing
quite so good as

ANZORA

IT MASTERS THE HAIR



Anzora Cream for greasy
scalps and Anzora Viola
for dry scalps. Obtain-
able from Wholesalers.

TERMS : 12/- dozen,
retail at 18/- dozen;
20/- dozen, retail at 30/-

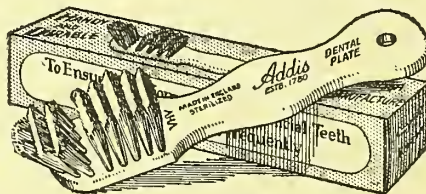
If unable to obtain from your
wholesaler write to Anzora Per-
fumery Co., Ltd., Willesden
Lane, London, N.W.6.

There are several
imitations, but there
is nothing quite so
good as ANZORA.
Both for the user and
for you. It is always
selling — every day
and all day bottle
after bottle of
ANZORA is sold.
Don't experiment
with substitutes—
rely on ANZORA.

**A SUPPLY OF ATTRAC-
TIVE SHOWCARDS
AND CUTOUTS SENT
POST FREE.**

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ESTD 1780

**WINGED
DENTAL
PLATE**



**BRUSH WORKS, HERTFORD
ENGLAND.**

HAIR

BURMAN

CLIPPERS

**For SURGICAL
and VETERINARY
PURPOSES.**

HAIRDRESSERS' CLIPPERS

The British-Made
Hair Clipper.



**Dainty Shingling
Clippers for
Ladies' use.**

BURMAN & Sons, Ltd., BIRMINGHAM

[illegible]

Some of the Advts. that are Selling X-Bazin

Any day now, your women customers will be asking "Have you got X-BAZIN?" They will inquire for the most potent of reasons—a wonderful product, competitive prices and powerful advertising.

The X-BAZIN trial tube retails at 6d.; Standard size, 2'-
See the two offers detailed. Note the amazing profit on
initial orders, for in addition to a full 33 $\frac{1}{3}$ per cent., we are
offering on specified initial orders 5 per cent. special window
display bonus and 4 dozen 6d. size absolutely free.

The 2 1/2 - size contains so much cream that it is quite the best value on the market and it can be used to the end because X-BAZIN never hardens in the tube. Your stock is always fresh ; your customers never dissatisfied.

Pleasantly perfumed, simple and safe to use, X-BAZIN is already selling in millions abroad.

X-BAZIN has been the standard scientific depilatory in France for a hundred years. It is a tried, proved product with an attractive packing that makes bright counter or window displays.

Profit by the first wave of buying. You can stock without risk, for we absolutely guarantee the sale of all goods ordered now by December 31st, 1929.

Send this coupon off to-day.

Tibo Products Co., Ltd., Audrey Ho., Ely Place, E.C.1

Guaranteed Sale Order

Please send me :—

		Doz.
3 doz. 2/- size X-BAZIN at 16/-		
4 doz. 6d. " " "		4/6
and 4 doz. 6d. size free, less 5%		
Special Window Display Bonus.		

OR

Strike not 1 doz. 2/- size at 16/- a doz.
1 doz. 6d. „ 4/6 a doz.
Plus 1 doz. 6d. size free.

Window show free with all orders.

All orders carriage paid.

Name

Address

X-BAZIN *Cream* DEPILATORY

DEARBORN (1923) LTD.

37 Gray's Inn Road, London, W.C.1

Telephone: HOLBORN 9669

Toilet Specialties.

	Price per doz. to Retailer	Selling Price P.A.T.A.
PILENTA SOAP 10/-	1/-	
A complexion soap.		
PROLACTUM 10/-	1/-	
For the lips.		
PARSIDIUM JELLY .. 10/-	1/-	
For wrinkles.		
ALLACITE OF ORANGE BLOSSOM 22/6	2/6	
A dressing cream.		
BORANIUM 22/6	2/6	
A hair tonic.		
CLEMINITE 22/6	2/5	
For a face lotion.		
COLLIANDUM (Powder & Solide.) 22/6	2/6	
For a face tint.		
PERGOL 22/6	2/6	
A deodorant.		
TEKKO PASTE 22/6	2/6	
Camphor cream.		
STALLAX { 13/6	1/6	
For a shampoo.		
JETTALINE { 22/6	2/6	
For clearing the skin.		
PHEMINOL 31/6	3/6	
A depilatory.		
MENNALINE 36/-	4/-	
For the eyelashes.		
MERCOLIZED WAX .. { 18/-	2/-	
A face cream.		
STYMOL { 31/6	3/6	
For oily complexions and blackheads.		
SILMERINE 36/-	4/-	
Hair-curling fluid.		
BARSYDE 22/6	2/6	
Dandruff eradicator.		
TAMMALITE 22/6	2/6	
For grey and faded hair.		
LIQUID PERGOL 31/6	3/6	
To check excessive perspiration locally.		
BICROLIUM 22/6	2/6	
For whitening the hands.		
COCONOIDS 31/6	3/6	
For figure development.		
SIPOLITE 18/-	2/-	
A new depilatory.		

The Products of

Messrs. PARKER, BELMONT & CO.

CLYNOL BERRIES .. 36/-	4/-
For obesity.	
SOFT PALERIUM .. 45/-	5/-
For wrinkles.	
LIQUID NAIL POLISH .. 10/-	1/-
Brilliant and lasting.	

Stocked by ALL Wholesale Houses.

FOREIGN AND COLONIAL DEPÔTS AND AGENCIES.

South Africa: LENNON, LTD., Cape Town, etc.
SIVE BROS., & KARNOVSKY, LTD.,
India: FRAMJEE & SON, Bombay. Johannesburg.
A. L. CHOUDRY, Calcutta.
New Zealand: SHARLAND & CO., Auckland and Wellington.
Denmark: KARL SCHULTZ & CO., Copenhagen.
Irish Free State: MAY, ROBERTS & CO., LTD., Dublin.

To the CHEMISTS of IRELAND

BUTYWAVE thanks
you for your practical
and almost unani-
mous support during
BUTYWAVE week.

Further advertising to follow.

W. FLETCHER, M.P.S.



THE ORIGINAL
:: AND ::
STILL THE BEST

**JACKEL'S
CREAM**
FOR THE HAIR

SOLD EVERYWHERE.

1/6 PER BOTTLE 2/6

Jackel's Cream has now been over
40 years on the market and enjoys
a steady reliable sale. Once a cus-
tomer buys Jackel's, imitations
have no appeal because Jackel's
is still the best.

11/6 and 18/- per dozen.
Retailing at 1/6 & 2/6 per bot.

BIG PROFITS ON THE NEW SHAMPOO.

SHOWCARDS AND PARTICULARS FROM
YOUR WHOLESALE HOUSE.

JACKEL et CIE (of Paris) Ltd.
GLASGOW.

Hot air

has its uses—in a Turkish bath.
I believe in facts

W. H. Thomas

Here are a few—

1. Mouson's Lilac Series is the talk of the trade.
2. Thousands of Lilac Series orders leave Union Street within the next month.
3. One Departmental Store is giving a frontage of 83 feet during May—not inches—feet. They've tested sales and know it's worth it.
4. Another recently sold well over £1,000 worth of Mouson's Lilac products in six weeks.
5. Another averaged £40 per day for a month.
6. The regret of a great many chemists, last Christmas, was that they did not buy three times as much. They could have sold it.
7. Mouson Lilac products are the best in the world, yet the cheapest. Strange, but true.
8. Over 90% of my accounts are chemists, and I don't supply grocers and ironmongers.

LILAC TIME OFFER

With every parcel you receive free sprays of imitation lilac flowers and free perfume for your customers to try.

Here is a suggested order, but providing it comes to £9 retail value or £6 trade value, of course any assortment will be sent.

6 doz.	Lilac Soap, 12/-	..	£3 12 0
8/12	„ „ „ Bath, 36/-	..	1 4 0
2	„ „ „ Perfume, 24/-	..	2 8 0
1	„ „ „ Talc. Powder, 12/-	..	0 12 0
1 1/2	„ „ „ Face Powder, Rachel, 12/-	..	0 6 0
1 1/2	„ „ „ Face Powder, Natural, 12/-	..	0 6 0
1 1/2	„ „ „ Bath Salts, 15/-	..	0 7 6
1/6	„ „ „ „ 27/-	..	0 4 6
			£9 0 0
		33 1/3%	3 0 0
	Less 2 1/2%—30 days	..	£6 0 0

Existing orders will keep us busy until the middle of May.
Send your order now and get delivery when the Lilac is in full bloom. Deliveries in strict rotation.

W. H. THOMAS

IMPORTER

**MOUSON HOUSE, 50/52 UNION STREET
LONDON, S.E.1**

Telephone: Hop 3934

Telegraphic Address: "Cremouson Sedist, London."



DO YOU STOCK
THE FOLLOWING
"QUICK SELLERS"?

- "HARLENE" for the Hair
- "CREMEX" Shampoo Powders
- "UZON" Brilliantine
- "ASTOL" for Grey Hair
- "JUNOFLORIS" SPRING BREATH TABLETS
- "JUNOFLORIS" Dentifrice
- "ASTINE" Vanishing Cream
- "ASTINE" Tooth Cream
- "ASTINE" Shaving Stick
- "ASTINE" Nail Cream
- "HARLENE" Hair Fixative
(For Gentlemen)
- "HARLENE" Wave Setting Lotion

Always In Full "Sale"!

EDWARDS' HARLENE TOILET PREPARATIONS

There is never a lull in the "Trade Wind" that keeps these World-Famous Toilet Preparations in full "Sale." The Excellence of the Products themselves, coupled with the Extensive and Continuous Advertising Campaign, keeps the "Trade Wind" always at full strength.

Thousands of new customers are introduced *every* week!

No Chemist or Store can afford to be without these World's Record Sellers!

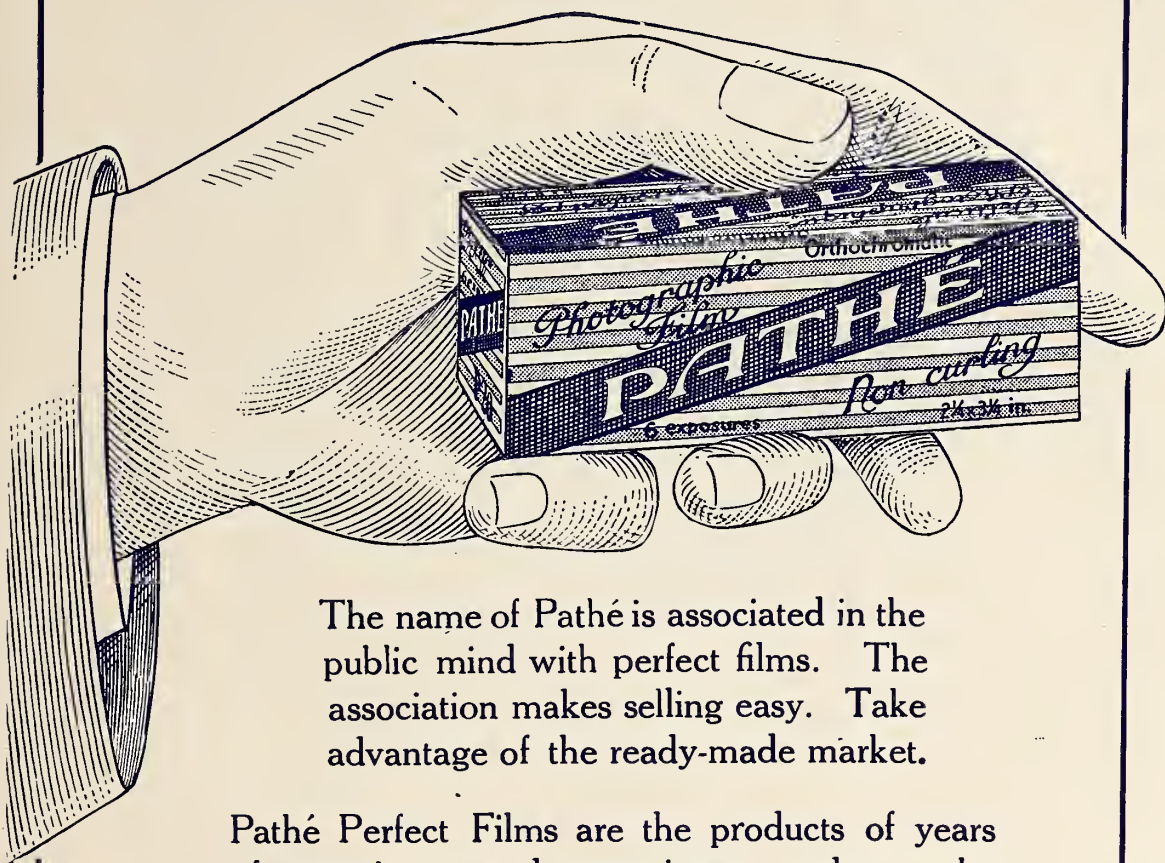


For Full Particulars, Terms, etc., write to:—

EDWARDS' HARLENE LTD.

20, 22, 24 & 26 LAMB'S CONDUIT STREET, LONDON, W.C.1

It Pays to Handle **PATHÉ FILMS**



The name of Pathé is associated in the public mind with perfect films. The association makes selling easy. Take advantage of the ready-made market.

Pathé Perfect Films are the products of years of experience and experiment and can be recommended by Pharmacists both to the "snapshotter," and to the photographic artist.

Send for our Special Photo List.

MAY, ROBERTS & CO., LTD.

(P.O. Box 157.)

7/13 Clerkenwell Road, London, E.C.1

Also at LIVERPOOL, PLYMOUTH and DUBLIN.



They all know him!

Everyone who takes photographs knows the Illingworth Film Baby! We are featuring him in all our 1929 advertising and telling the public that wherever they see him they can buy Illingworth's Photographic Materials. Therefore display him in YOUR window and gain the full benefit of our advertising.

Illingworth's

THOMAS ILLINGWORTH & CO., LTD., PARK ROYAL, WILLESDEN JUNCTION, N.W.10



Tell them to take one like this

Long shots and Close-Ups

Close-ups made Movies more popular. D. W. Griffith discovered that. Let us learn from him. Close-ups will make *snapshots* more popular. Your "Brownie" customers will take

two snapshots where they formerly took *one* and get more fun from their photography. It means further Film Sales, more D. & P.

So the close-up idea is a good idea. It will please your customers and pay you.

The
PORTRAIT
"BROWNIE"
*a great little
business builder*



Kodak Limited, Kingsway, London, W.C.2.

—and then one like this



EVERYTHING
FOR
THE PHOTOGRAPHER
AND
PHOTOGRAPHIC DEALER

Being AGENTS for EVERY MAKER OF REPUTE
(Both English and Continental)
we supply all their Products at their Prices, Discounts and Terms.

And we offer all
SUNDRIES & CHEMICALS
at highly competitive prices

Think what a saving and convenience :—
**EVERYTHING PHOTOGRAPHIC (Also
PHARMACEUTICAL) FROM ONE HOUSE.**

One Order—One Delivery—One Account.

We give a Free Weekly-Motor Delivery to most Towns, etc., in Yorkshire and Lancashire, and to many in other Northern and Midland Counties

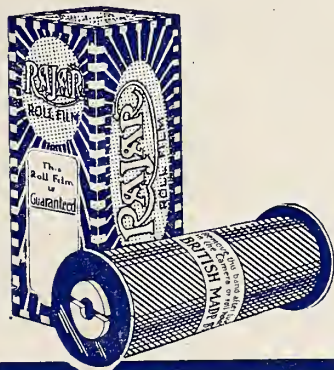
If you have not had our
PHOTOGRAPHIC PRICE LIST

Please write for a copy.

It is the most comprehensive list issued.

BROOK, PARKER & CO., Ltd.
ASHFIELD, HORTON ROAD,
BRADFORD





RAJAR
BRITISH MADE

ROLL FILM

**EQUAL TO A
FASTER LENS**

Sales rapidly increasing.
Big National Advertising
creates the buyers.

A window display links up with our National Advertising Campaign



Write for Display Matter
and make a window show
for Whitsun.

Paget

**SELF-TONING
PAPER**

The popular daylight
printing paper. Made
in two grades :

Normal for the average
negatives.

Extra Vigorous for thin
or ghost negatives.

Products of—

APEM LIMITED, WATFORD HERTS

Factories : MOBBERLEY, SOUTHGATE, WATFORD.

Telephone—Watford 3301 (3 lines).

Telegrams—"Apem, Watford."

KOSMOS

Gaslight or Bromide?

Your D. & P. Service must live up to its high reputation and be equipped to meet the increased business which this year promises to bring. Have you considered, for instance, the important question of printing materials for this season?

You may require :

A paper of great gaslight speed—enjoying an enviable reputation for latitude and freedom from staining. A paper made in three grades of contrast and three surfaces, and producing clean, sparkling prints of a rich blue-black tone—a paper, in fact, that you can recommend to your customers for their own use.

If so, use

KOSMOS NOVEX

Paper and Card

A bromide paper of gaslight contrast—equally suitable for contact or enlarging. A paper of remarkable physical hardness, able to stand exceptionally rough handling in rush hours, and easy to glaze. A paper which, in the words of the P.P.A. Research Department, is “the most vigorous paper ever tried.”

If so, use

KOSMOS BROMIDE

**Grade 5. Super-Vigorous
Paper and Card**

We are anxious to assist you in the choice of a suitable printing medium. May we send you our price list and free samples?



KOSMOS PHOTOGRAPHICS LIMITED
LETCWORTH HERTS

Telephone : Letcworth 128
and

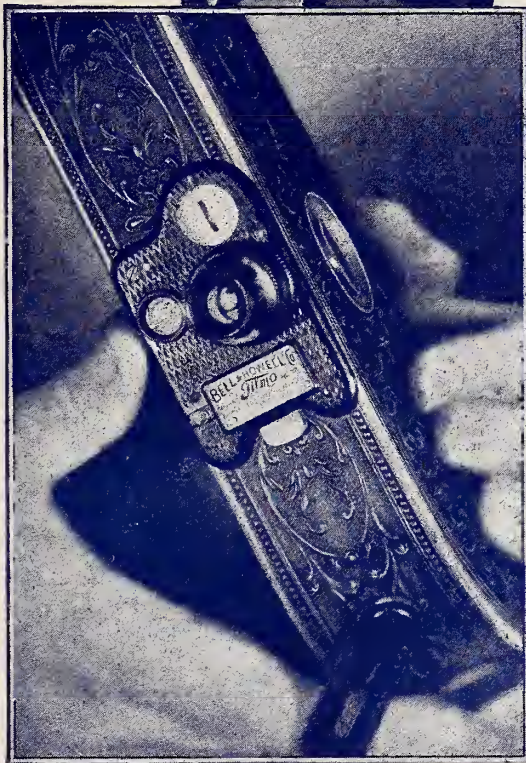
155 VICTORIA STREET

LONDON, S.W.1

Telephone : Victoria 2685.

KEEP THINGS MOVING

Filmo 75 sells at £30 complete with case. Choice of three beautiful Colours.



WITH

FILMO

the Popular Cine Camera

ATTRACTIVELY LOW PRICED

Filmo Camera gives best results—to the retailer as well as the user. The coming season will prove a bumper one for those enterprising dealers who actively associate themselves with the Cine business. If you have not already ordered a liberal stock of Filmo apparatus, do so at once. Making movies has captured the public imagination.

Sales are increasing by leaps and bounds. Many dealers are securing big and growing profits—you can too. Lose no time, the season is here now. There are all sorts of sales helps. Write us at once about them and about the

NOW—ADD THIS SURE PROFIT MAKING BRANCH TO YOUR BUSINESS.

MAIL THIS COUPON to BELL & HOWELL Co. Ltd. 320 Regent St., London, W.1.

Please send us full particulars of trade terms for Filmo Amateur Movie Apparatus and information about literature and other sales helps.

NAME OF FIRM

ADDRESS

C. & D.

GENEROUS DISCOUNTS TO DEALERS

BELL & HOWELL Co. Ltd. 320 Regent St., London, W.1



Why Experiment.

The
Proved D & P Service is

PHOTOPRESS

Send us all your Spools
for Developing & Printing
and please your Customers

10 Johnson's Court,
Fleet Street,
London,
E.C.4.

*"The Owl"
Photographic
Service*

"There is a tide in the affairs of men."

Only one Chemist supplied
in each town or district.

All work under the direct supervision
of a professional photographer



COMPETITION
DOES NOT MAKE
HIM BLINK.

*Terms: 40% Monthly Discount, and a FREE Postcard ENLARGEMENT
of best negative with every film developed and six prints.*

WORK RECEIVED FIRST POST DESPATCHED SAME DAY,
POST PAID. WE SUPPLY NO PRINTED MATTER WHATEVER
AS WE GIVE HIGHEST CLASS WORK AT ROCK BOTTOM
TERMS. SPECIMENS, HOWEVER, ARE ALWAYS AVAILABLE
AND SENT PERIODICALLY TO OUR FRIENDS. WRITE FOR
SOME NOW AND FIX UP IN FRONT OF YOUR COMPETITOR.

Cheetham's Photographic Works

Spout Yard, Louth,
Lincs.
Phone: Louth 226.

DEVELOPING & PRINTING

**DEVELOPING
AND
PRINTING**

BEST
WORK.

QUICK
SERVICE

LOW
PRICES

ENLARGING,
COLOURING,
REPRODUCTIONS,
SLIDES, ETC.

Actual Size 12½" × 15½"

Please send for
Price List and
particulars of the

U. P.

COMPLETE AND
GUARANTEED
PHOTOGRAPHIC
SERVICE

INCREASED DISCOUNT

ENLARGEMENTS

DELIGHTFUL
PORTRAITS
AND
PICTURES

ARE OBTAINED BY
HAVING SNAPSHOTS
OF YOUR CHILDREN,
FRIENDS AND
HOLIDAY SCENES
ENLARGED.

PRICES

11x14	1-2	3-6	2-
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ENLARGEMENTS 6

ARTISTS
FOUR MOUNTS

Actual Size 12½" × 15½"

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The three showcards reproduced here (together with order book) will be sent FREE to any chemist using our full service.

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THE SAME DAY**

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WE CAN MAKE PRINTS & ENLARGEMENTS SIMILAR TO
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We specialise in these,
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of our Service for this
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LIVERPOOL.

384 CHESTER ROAD,
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CROWN STREET,
LEEDS.

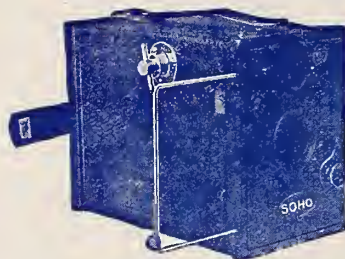
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THE "SOHO" JUNIOR

For Pictures $3\frac{1}{4}" \times 2\frac{1}{4}"$

A simple yet effective British Made Box Model Camera, at a price to suit all pockets.



The "SOHO" "FARNEAR"

For Pictures $3\frac{1}{4}" \times 2\frac{1}{4}"$

A Camera for pictures either far or near the Camera at a price hitherto not approached. Landscapes, Snapshots, Seascapes, Animals, or Portraiture, are all possible with the "Soho" "Farnear."



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Box form, fixed focus, ever ready daylight loading Camera, that anyone without knowledge of photography can use successfully from the start.

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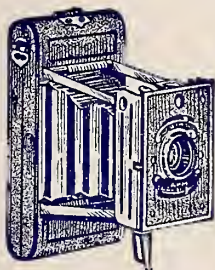
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"SOHO" CAMERAS

MADE FOLDING MODELS

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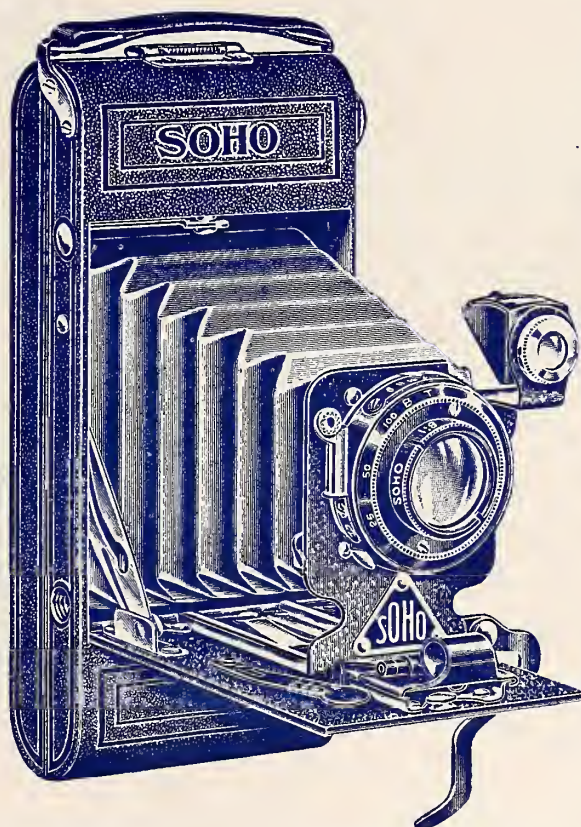


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ALL-METAL BODY
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The "ALTREX" "CELTREX"
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Everything in Photographics

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This is a concise guide to chemists commencing and carrying on a photographic department. The book is a reprint of the treatise in *The Chemist and Druggist Diary*, 1926, with additional chapters and formulas.

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ROLL FILMS **FILM PACKS**

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Gives **ABSOLUTELY CORRECT EXPOSURE TIMES** for all subjects, from dark interiors to seascapes and mountain views.

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A NEW PHOTO-MOUNTANT

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This is put up in our well-known Aluminium Container with brush fitted in tube inside and is an attractive and profitable line to handle.

PROFESSIONAL AND AMATEUR PHOTOGRAPHERS

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For the efficient, economical and
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**HYPO
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Quotations and a copy of our No. 9 List sent on application.

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*New cartons
that will
attract new
Business*

Here are two new carton designs for Hypo packing. See how clearly they show up, and judge the good display they will make.

Use these new cartons this year, and your business will carry the stamp of progress and enterprise. You will find, too, that sales will benefit all round.

These new cartons are available in two colours—green and buff.

NOTE THIS USEFUL EVER-READY MEASURE

It is a feature that will prove of extreme utility to all Hypo buyers. By solving what is often an awkward problem it will easily double sales. It certainly allows the correct quantities to be measured out.

This ever-ready measure marks the most useful introduction in Hypo packing. See that your customers get the benefit of it.

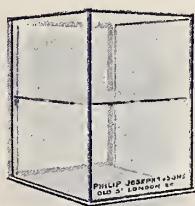
*Have you received our
price list and samples yet?*

ROBINSON & SONS, LTD.

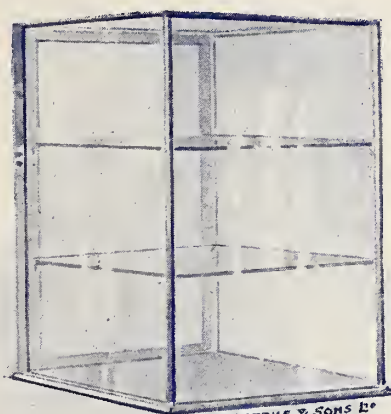
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CARTONS OF ALL KINDS
CHESTERFIELD



*Robinsons have been specialists in packing
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The Original Silent Salesman Family



THE IDEAL SHOWCASES
FOR THE DISPLAY OF
CAMERAS AND PHOTO-
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THEY LET THEIR
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THEY KEEP THE GOODS
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SEND FOR OUR FULL ILLUSTRATED
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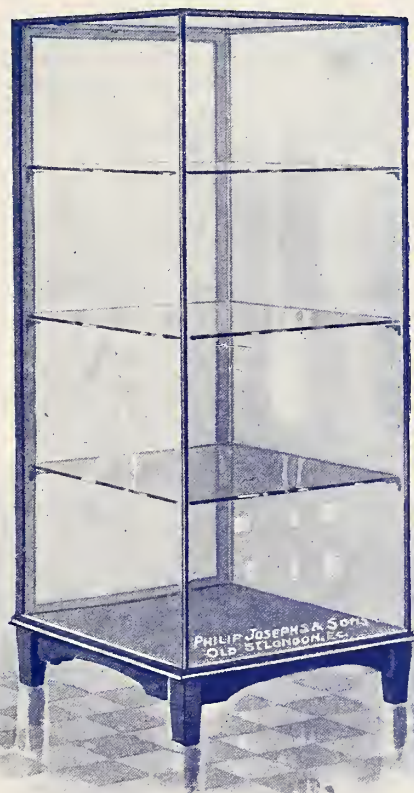
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Established in 1826

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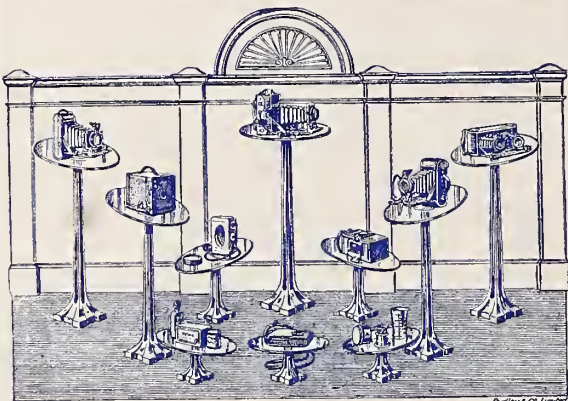
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Chemical Manufacturers, P.O. Box 62, Accrington

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No. CD/SF 2112. The "Bellevue" Display Set, consisting of the following units:—1 24 in. beautifully tapered crystal glass pedestal with heavy foot; 2 ditto 20 ins. high; 2 ditto 18 ins. high; 2 ditto 12 ins. high; 3 ditto 6 ins. high; 1 18 x 12 in. glass oval shelf; 4 ditto 14½ x 10 ins.; 2 ditto 12 x 9 ins.; 3 ditto 11 x 5 ins.

The Whole Set Complete for 50/-.

Send for Illustrated List of Display Stands and Window Fittings, No. CD1115, free on request.

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SEND YOUR ENQUIRIES TO
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This year the
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SPECIAL ISSUE**
will be published on
JUNE 29

IT WILL BE AS USUAL THE OUTSTANDING
PHARMACEUTICAL FEATURE OF THE YEAR

Advertising pages in black and
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∴ and on tinted art papers ∴

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∴ buted as part of the issue ∴

For all particulars write now to

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→ **"MERCK"**

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6 doz. 6d. No. 1
6 doz. 6d. No. 5
for 54/-

less 10% one month
CARRIAGE PAID

This Bonus Gift of One Dozen 6d. AMAMI Shampoos is offered in return for a window show, and is valid May 1st to 31st. Spring is always a strong selling season for AMAMI. In addition, AMAMI sales are responding finely to the stimulus of the big Coupon Gift Scheme, now being widely advertised in the public press. In such favourable conditions a window display during May will send your AMAMI sales soaring. The free assortment contains: 3 No. 7, 2 No. 8, 2 No. 9, 1 No. 10, 2 No. 1, 2 No. 5. Ask too for the GIANT AMAMI SACHET 19in. by 23in. and new AMAMI Showcards.

Order now from your usual wholesaler. If any difficulty in obtaining, order direct from Prichard & Constance (Mfg.) Limited, 11, Broad Street, London, W.C.2.

AMAMI BONUS OFFER

OPEN MAY 1st to MAY 31st

FOR ONE MONTH— *Halex brushes free*

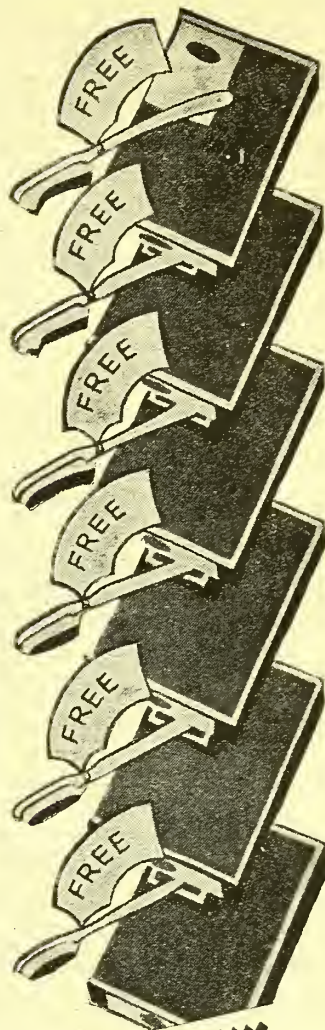
*An extra Halex brush given with every
box of ½-dozen Halex Toothbrushes ordered
on Bonus Terms*

Order your Halex Brushes NOW—and make 33½% MORE PROFIT on toothbrush sales! On every order for 3-dozen Halex Brushes you send in during May you receive a bonus box of SIX FREE BRUSHES. These brushes sell for 6/3. On an outlay of 30/9, therefore, you make a clear cash profit of 25/- instead of 18/9—33½% more. You make a total profit on cost of 83%.

On May 31st this Halex Bonus Offer ends. All orders received after that date will be subject to the usual terms. But, during the bonus period, there is no limit to the number of brushes you can buy on the bonus terms, which are that for every half-dozen Halex Brushes you order, in quantities not smaller than 3 dozen at a time, you receive one extra free brush. There is only one condition we make to this offer—and that is, that you show the Halex Window Display in your window or on your counter, for a fortnight, commencing not later than May 31st.

SEND IN THIS ORDER FORM TO-DAY

The Halex Window Display is supplied—FREE—with all initial orders for 3 dozen or more Halex Toothbrushes. 17" wide by 17" high—neat, compact, yet highly effective—it can be used either with or without the red and black showcase. It is designed to help you sell more Halex at a time when you make 33½% more profit on every Halex brush you sell.



ORDER FORM

To your usual Wholesaler:—

- {a} Please supply me with..... * dozen Halex Toothbrushes, together with the free Display Material and Bonus Brushes, in consideration of my exhibiting the Halex Window Display for a fortnight, commencing not later than May 31st.
- {b} The Halex Showcase (if required, the Halex Showcase is included FREE, in addition to the Halex Window Display, with first orders on bonus terms for a minimum of 4 dozen Halex Brushes).

Name.....

Address.....

* The minimum order to qualify for the free brush offer is 3 dozen.

THE BRITISH XYLONITE CO. LTD., HALE END, LONDON, E.4

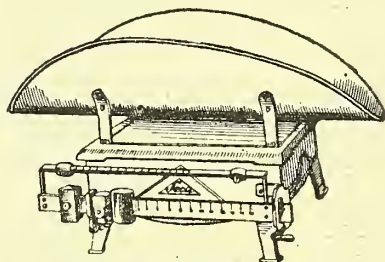
WHY NOT OWN A WEIGHER AND LET IT BUY ITSELF?

Special Exhibition Offer

FROM NOW UNTIL THE CLOSE OF THE CHEMISTS' EXHIBITION ON MAY 31 WE ARE OFFERING 500 OF THESE ATTRACTIVE SMALL WEIGHERS AT THE

Special Reduced Price of £12
(USUAL PRICE £17)

We are exhibiting at the Chemists' Exhibition, May 27-31, and invite you to visit Stand 155, where a full range of all types of indoor and outdoor weighers suitable for the Chemist will be shown.



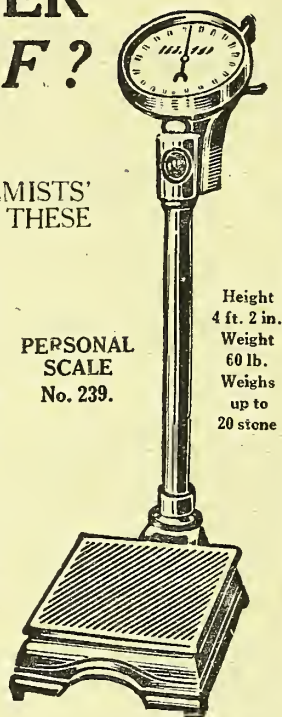
BABY SCALE No. 169B.
Cash Price £3.

THE PENNIES PAY AS THE CUSTOMERS WEIGH

For further particulars write, call, or 'phone to our City Showrooms:

SHEFRAS NOVELTY CO.,
Fetter House, 54/5 Fetter Lane,
LONDON E.C.4

'Phone: City 0329.



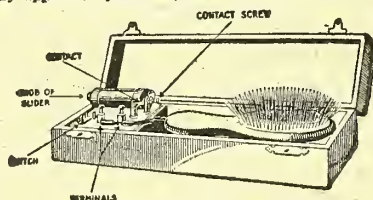
**PERSONAL
SCALE
No. 239.**

Height
4 ft. 2 in.
Weight
60 lb.
Weighs
up to
20 stone

The ZENDIX ELECTRIC HAIRBRUSH

The latest innovation for the scientific treatment of the scalp, combining the stimulating effect of an electric current with the massaging effect of the brush. A continuous electric current is brought into contact with the scalp, promoting activity of the cells and stimulating the growth of hair, loosening and removing dandruff.

The current is supplied by a 4v. pocket battery and may be adjusted but is never too violent. The whole outfit is packed in a neat attractive case and makes a ready appeal to your lady customers.



RETAIL 25/- Wholesale terms on application.
ZENDIX ELECTRIC CO.
TRAFALGAR WORKS, STATION RD.
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"ODENTIC" PLATE BRUSH

Regd. No. 417637.

From all
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Packed in 12-dozen Display Boxes.

Manufacturers:

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Agent for S. Africa—C. GORDON DAVIES & CO.,
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Made with Extra Stiff Bleached and Unbleached Bristles.

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MADE IN ENGLAND. SOLD EVERYWHERE.



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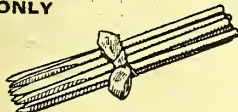
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Perfumes & Face Powders

PARFUMS MARCEL GUERLAIN, LTD.

Regent Arcade House,

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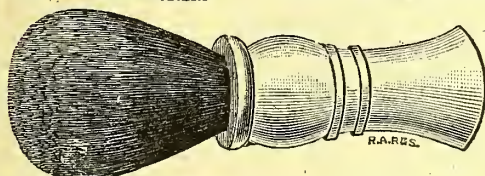
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They are essentially quality products.
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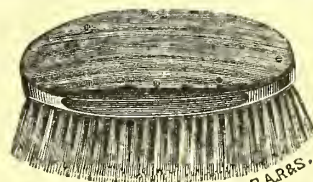


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R.A.R.S.

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them?



R.A.R.S.



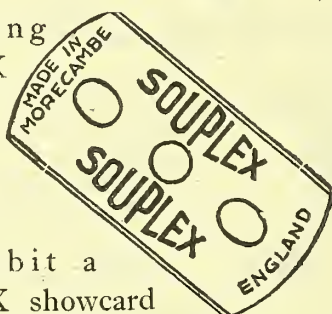
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To exhibit a
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SOUPLEX BLADES are re-
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Place your order *TO-DAY* with your
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Are known the World over as
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**BEST
BRITISH
BRUSHES**

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A
**KEEN
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AT A
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The Blade that SELLS as it SHAVES—
“LIKE GREASED LIGHTNING!”

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GREY HAIRS

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TOUCH THEM UP WITH

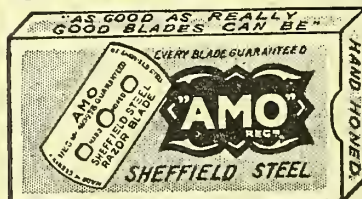
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and they will instantly recover their
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Retail **1/6 doz.**
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Showcards Supplied

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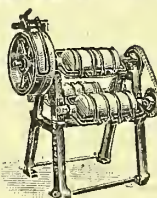
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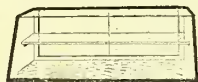
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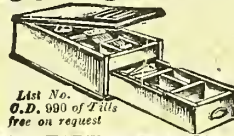
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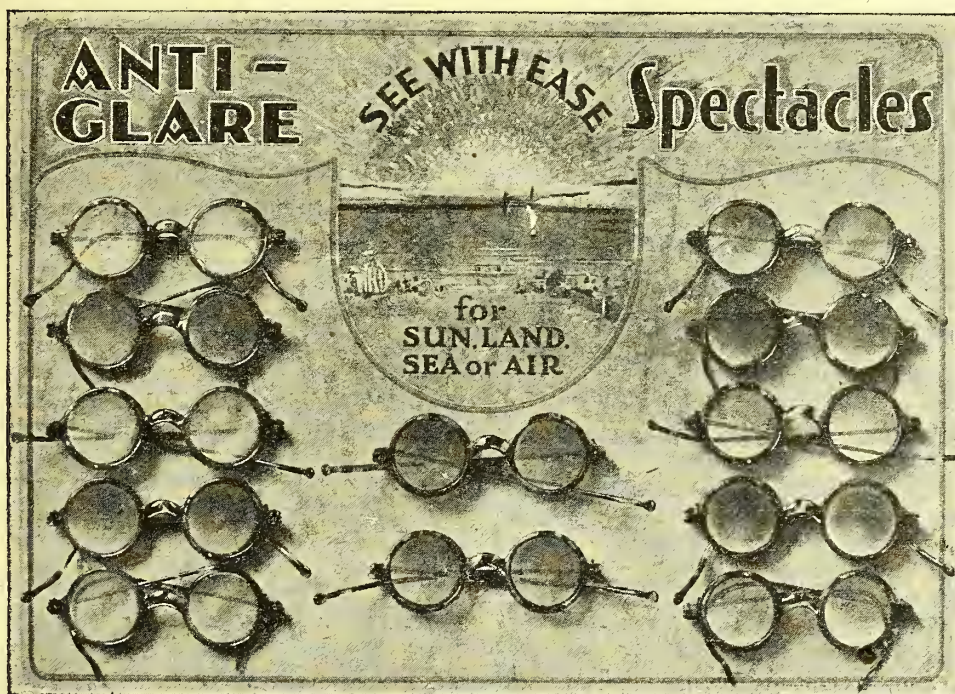
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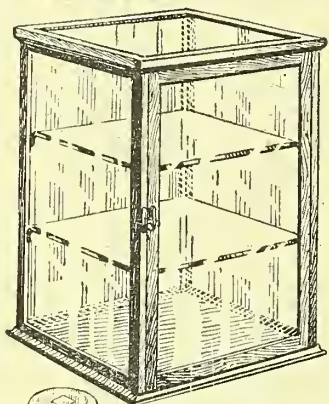
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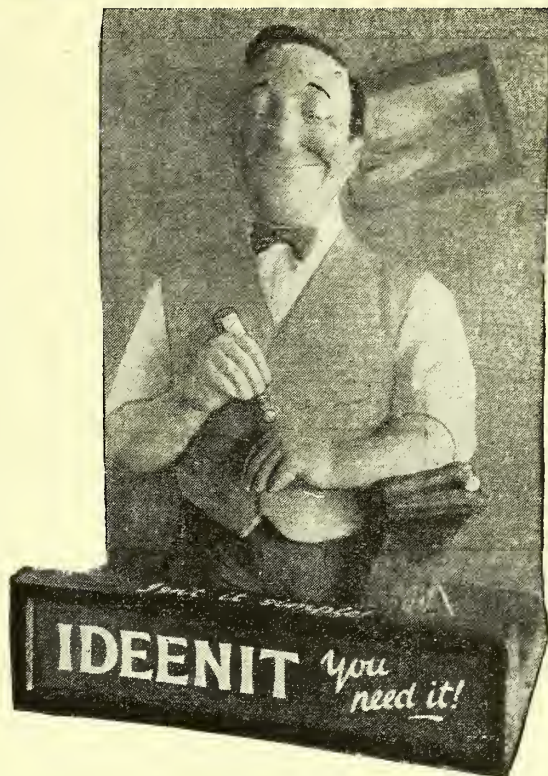
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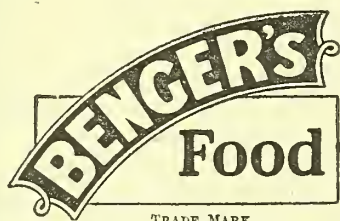


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A WEEKLY JOURNAL OF PHARMACY AND OF THE CHEMICAL AND DRUG TRADES

THE CHEMIST AND DRUGGIST is in circulation and reputation the leading journal addressing the Chemical and Drug trades in the British Empire and other countries in the Old and New Worlds. It is the official organ of the Pharmaceutical Society of Ireland, the Chemists' and Druggists' Society of Ireland, and of other Chemists Societies in the Overseas Dominions.

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Recent Patents

Abstracts of specifications of recently-granted patents for inventions. The complete specification (1s. each including postage) of any British patent can be obtained from the Patent Office, 25 Southampton Buildings, London, W.C.2, on quoting the name of the patentee and the number of the patent.

Miscible Castor Oil.—Castor oil is heated with a metallic catalyst (nickel or tin-bismuth alloy) in a vacuum at a temperature of 280° for six to eight hours. and when the reaction mixture has cooled the oil can be separated from the metal by pouring off.—(M. Melamid, Berlin. 308,502.)

Benziminazolone-Arsinic Acids.—The manufacture of N-substituted 3: 4-benziminazolone-arsinic acids by interaction of arsenious acid and a diazo compound obtained from an amino-benziminazolone substituted at a nitrogen atom of the benziminazolone nucleus by an alkyl, aralkyl or alkylene group. (I. G. Farbenindustrie. 281,703.)

English and Welsh News

The Editor will be obliged if subscribers will send him marked copies of newspapers containing items of interest for insertion in this or other news sections.

Safeguarding of Key Industries

A representation has been made to the Board of Trade under Section 10 (5) of the Finance Act, 1926, for the exemption of methylcyclohexanol methyladipate from Key Industry duty. The question of the renewal of the Safeguarding of Industries (Exemption) No. 6 Order 1928, is also under consideration. The articles covered by this Order are:—R. acetone; acetone (fermentation); acetone, synthetic; radium compounds. Any communication on these matters should be addressed to the Principal Assistant Secretary, Industries and Manufactures Department, Board of Trade, Great George Street, London, S.W.1, within one month from the date of this notice.

Printing Exhibition

The eighth International Exhibition of the Printing and Allied Trades has been held at Olympia during the past two weeks. The bulk of the space has been taken up by machinery, but there are other adjuncts to printing. In the gallery, for instance, there are exhibits of gummed paper, cloth tapes, disinfectant coils for fumigating purposes by The Gummed Paper Manufacturing Co., Ltd., Narborough, while Samuel Jones & Co., Ltd., have a special display of non-curling gummed papers as well as gummed tapes and sealing machines. There also will be found Tom Morley, showcard specialist, Reading, Lilywhite, Ltd., Halifax, have a big display of photographic cut-outs, guillotine showcards and photo-folders. Another indication of the importance of advertising in the industries in which the chemist is interested is shown in the special exhibit of foreign advertising material (likewise shown in the gallery) collected by "Advertising Display." Italy shows, among other things, the poster of a disinfectant, posters for a toilet powder, medicated wool and face cream (all done for the well-known firm of Bertelli), likewise two medical waters, "Sila" and "Arquebus." The exhibit of commercial, technical and advertising photography this week was made under the auspices of the Professional Photographers' Association. Ernest Milner shows two photographs of Imperial Chemical House. The Photopress exhibit comprises news pictures, studies for advertisements, catalogue work and views of buildings, scenes abroad, etc. Howard and Joan Coster show samples of photographs done for advertising purposes in connection with Amami, Vivelle Perfumes, Beecham's Pills, and Hinds' Cream, while Yvonne Gregory specialises among other things in perfumes, toilet requisites, cosmetics and toilet preparations. Charles Wormald shows photographs and illustrations for Coty, Imperial Chemical Industries, Ltd., Parke, Davis & Co., and Yardley & Co., Ltd.

Visit to Works

On April 18, several members of the West Ham District Association of Pharmacists accepted the invitation of the Standard Yeast Co., Ltd., to visit their works at Chiswick. The company supplied saloon motor coaches to convey the party from Stratford and back again. The party was received by the directors of the company, after which a tour of the extensive works under the personal guidance of Mr. Charles Doctor (general manager) was begun. From the roof of the factory a magnificent view of the Thames and surrounding country was obtained. Here also the visitors were shown a tank containing 1,500 tons of molasses, which was to be purified in huge vats. In well-equipped laboratories they saw the culture of the yeast cells in agar-agar. The preparation of Lyco Yeast Tablets was also explained. After the tour of inspection tea was served. Mr. Sawtell (managing director) said that he would always retain very pleasant recollections of their visit, as West Ham was the first association to pay them a visit. A hearty vote of thanks was proposed by the president (Mr. J. Thomson), and duly carried.

Birmingham

For passing as genuine half-crowns pennies which had been silvered over, two men were committed to the Birmingham Quarter Sessions for trial, bail being allowed.

Wine off-licences have been granted to Violet Ellen Williams, 614 Coventry Road, Small Heath, a chemist's widow conducting a pharmacy under qualified management, and to Harold Ely (Chemists), Ltd., 48 Dads Lane, King's Heath. The application of the Co-operative Society of Stirchley for a similar licence has been refused.

Liverpool

Mr. A. J. Ferriday, County Road, Walton, is recuperating at West Kirby, at the mouth of the Dee, following his long illness and an operation.

Mr. C. Wherley, ex-president of the Wallasey Association, is enjoying a holiday in Switzerland, and his business in Rake Lane is being carried on by his nephew.

At Liverpool Police Court, on April 23, James Kay (46) was sentenced to three months' imprisonment in the second division for stealing razor blades from Evans Sons Lescher & Webb, Ltd., his employers. Jonathan Walmsley (46), hardware dealer, Hall Lane, was similarly sentenced for receiving. It was stated for the prosecution that the thefts had been going on for over two years, and that razor blades, worth about £500, were unaccounted for in the stock.

Seventy-four members of the Bolton and District Branch of the Pharmaceutical Society visited the laboratories and works of Ayrton, Saunders & Co., Ltd., on April 17. They were conducted in parties round the premises, and met in the staff canteen for tea. The arrangements for this visit were made by Mr. Dunne, district secretary of the branch. Mr. Dalrymple (director) welcomed the party and spoke shortly on developments in pharmacy, with reference to products which had been seen in process of manufacture. In proposing thanks to Ayrton, Saunders & Co., Ltd., Mr. Fox referred to the courtesy of the staff. Mr. Chapman assured the company of the pleasure such visits gave, and promised that the kind expressions would be conveyed not only to his colleagues on the Board, but also to the whole staff.

Manchester

The business carried on for many years at 69 Market Street, Manchester, first by James Woolley, Sons & Co., Ltd., then by Blain & Hankinson, and latterly by Taylors' Drug Co., Ltd., is about to be closed. A quarter of a century ago there were several well-known pharmacies in Market Street; now only that of Westmacott & Son will remain.

On April 18 several Manchester and Salford chemists and their assistants attended a meeting at the Midland Hotel at the invitation of Kodak, Ltd., to hear an address by Mr. Bell, the advertising expert. After an interval for refreshments a Kodak ciné film was shown depicting the works at Harrow, together with many interesting processes in the D. and P. department and in the manufacture of cameras. A ciné colour film was also shown. A cordial vote of thanks to Mr. Bell concluded the proceedings.

Miscellaneous

POISON-LICENCE APPLICATION.—Mr. J. W. Blackwood, Reigate, has applied to the town council for a licence to sell agricultural and horticultural poisons.—An application for a similar licence has been made to the Kent County Council by Mr. H. George, Woodchurch.

AN EXPIRED LICENCE.—At Southport, on April 15, John Crossley, Southbank Road, was fined 20s. for selling a Jutable medicine without a licence. The defendant said that he took over the business last July, and obtained a patent-medicine licence; he did not know that it expired in a month.

INCORPORATED SALES MANAGERS' ASSOCIATION.—Forthcoming arrangements of the Incorporated Sales Managers' Association of the United Kingdom include a conference at Bristol on May 2, 3 and 4, and a five weeks' visit to Canada and the United States, starting on August 3. Particulars may be obtained from the Secretary, 101 Great Russell Street, London, W.C.1.

DANGEROUS DRUGS ACTS.—At the Mansion House Justice Room, London, on April 24, Stanley Reginald Naylor, chemist and druggist, pleaded "Guilty" to charges of stealing from 78 Fenchurch Street, E.C., 43 gr. of cocaine, value 3s., and of failing to enter in a book the particulars concerning 43 gr. of cocaine dealt with by him. Mr. G. Dennis Murphy, managing director of Hygienic Stores, Ltd., said that the defendant had the highest possible character and the company did not in any way press the charge. The alderman ordered a remand and said he should like a medical report.

IN THE COURTS.—In Shoreditch County Court, London, on April 18, Damancy & Co., Ltd., manufacturing chemists, Harrow, sought to enforce the payment of a judgment debt of £16 3s. 11d. by Dr. William Henry Fernando, Lea Bridge Road, E. Mr. Cyril Davis, managing director of the plaintiff company, said the defendant produced a wad of notes and flourished them in his face. The money was paid in court.—In the King's Bench Division of the High Court, London, on April 23, Miss Esther E. Mayes, Leyton, described as a chemist's assistant, was awarded £3,824 damages for injuries received as the result of a collision between a London General Omnibus Company's omnibus and a motor-car.—At Bow Street Police Court, on April 23, James Robertson (twenty-eight), printer, of no fixed abode, was remanded on a charge of breaking into a shop of Lewis & Burrows, Ltd., chemists, New Oxford Street, W.C., and stealing three cameras value £12.—At Blackpool Police Court, recently, Cecil Stephenson, drug-store proprietor, was fined £5 for describing as paregoric a mixture containing no opium and £1 for selling it, with costs, a total of £20 14s. 10d.

Scottish News

Brevities

Mr. Robert J. Nairn, Ph.C., was capped B.Sc. (Pharmacy) at the graduation ceremony in Glasgow University on April 20.

Sir Alfred Ewing, principal of Edinburgh University, who is shortly to retire, was presented with the freedom of the city on April 18.

A small outbreak of fire occurred in the premises of Hinksman & Forrest, Ltd., chemists and druggists, High Street, Carlisle, on April 17. No serious damage was done.

Glycerine, Ltd., have appointed as their agents in Scotland A. W. Wardrop & Co., 80 York Street, Glasgow, who will be able to make prompt deliveries from stocks.

Mr. J. S. B. Heddle, 257A Leith Walk, Leith, secretary of the Scottish Chemists' Bowling Association, informs us that the annual rink match will take place in Stirling on June 5.

Sir James Irvine, principal of St. Andrew's University, has been awarded the Elliott Cresson gold medal by the Franklin Institute (State of Pennsylvania) for his research on carbohydrate chemistry.

Mr. James Dickson and Mr. John Simpson, who have been associated with the late Mr. Macaulay in the management of Donald Macaulay, Ltd., distributing agents, Glasgow, have been made directors of the company.

A thesis by Mr. W. Johnson, B.Sc., brother of Mr. A. Johnson, chemist and druggist, Lanark, for the Ph.D. degree has been accepted by Glasgow University. Dr. Johnson's subject was "The Action of Double Salts at Varying Temperatures."

Aberdeen

The annual competition for the Petrie Trust Bursary is to be held in Aberdeen on May 8. Entries will be received up to May 1 by Mr. M. K. Watt, 28 Esslemont Avenue, Aberdeen, who will supply any further particulars required.

The second number of "Pharmonion," the students' magazine of Robert Gordon's Technical College, Aberdeen, is quite up to the standard of the opening issue. Features in the present issue are special articles by Dr. E. G. Brvant and Mr. T. Maben, and there are contributions of a humorous nature by past and present students.

Irish News

Brevities

Mr. D. J. Pinkerton has opened a pharmacy at Aughnacloy, co. Tyrone.

Mr. T. J. Barrett, Rose-Inn Street, Kilkenny, has been appointed apothecary to the Central Hospital and County Infirmary, in succession to the late Dr. J. White.

General Mulcahy has announced in the Dail that pharmacists have been appointed by the Local Government Department to bring up to date the list of requirements of drugs, medicines and appliances for the Free State.

Belfast

At the annual inspection of the 20th Belfast Company of the Boys' Brigade, Lieut. A. Dundee, M.C., L.P.S.I., York Road, Belfast, was the inspecting officer.

At the annual Easter vestry of St. Thomas' Church, Belfast, Mr. A. W. Mann, M.P.S.I. was appointed people's churchwarden, and Mr. Howe, L.P.S.I., a sidesman.

Mr. R. R. Bennett, chairman of the British Pharmaceutical Conference, paid a visit to Belfast during the month, and was entertained by Mr. W. J. Hardy, president of the Pharmaceutical Society of Northern Ireland. During his stay Mr. Bennett went on a motor trip to the Giant's Causeway with Mr. Hardy, Mr. Storey, Mr. Todd and Mr. Dundee, members of the Council of the Pharmaceutical Society, and Mr. Kirkpatrick (secretary). Mr. Alex. Hardy also accompanied the party. Mr. Bennett was the guest of Mr. Hardy at the Armagh Races.

A beautiful stained-glass window, provided by Mr. and Mrs. T. W. McMullan, Bangor and Belfast, in memory of their son, Harold, has been unveiled at First Presbyterian Church, Bangor. Miss Erskine performed the unveiling ceremony, and Rev. W. J. Currie, B.A., offered the dedication prayer.

Speaking at the Grocery and Allied Trades Exhibition, in Belfast, Mr. T. W. McMullan, M.P., chemist and druggist, said they were all keen on reciprocity throughout the Empire, and were anxious to do all they could for their peoples across the seas. Goods sold in a courteous manner would encourage the customer to come back and repeat his order. Trade was not prosperous, and he felt convinced that conditions would not improve until safeguarding was very largely extended. There were other signs of returning prosperity, and he felt it was not too much to hope that 1929 would bring them to the turn of the depression.

In connection with the supply of medicines and medical and surgical appliances to the Boards of Guardians of Northern Ireland, competition this year was unusually keen. The following firms sent in tenders for medicines to the various Boards:—C. J. Hewlett & Son, London; R. Sumner & Co., Liverpool; W. G. Taylor, Birmingham; Ben. Clarke & Sons, Belfast; and Fred. Storey, Ltd., Belfast. Sumner & Co. and Fred. Storey, Ltd., secured

all the medicine contracts. C. J. Hewlett & Son, who held some contracts last year, did not secure any this year. The following firms tendered for the supply of medical and surgical appliances:—W. G. Taylor, Birmingham; Fred. Storey, Ltd., Belfast; C. J. Hewlett & Son, London; S. Connor & Sons, Newry; Baillie & Son, Stockport; and J. Clarke & Son, Ltd., Belfast. S. Connor & Sons secured practically all the dressing contracts, and Fred. Storey, Ltd. and J. Clarke & Co., Ltd., a few each.

British Pharmaceutical Conference

UNDER the auspices of the Entertainments Committee of the Pharmaceutical Conference, a fancy dress carnival was held in the Plaza Ballroom, Dublin, on April 19. The dance was organised to meet the expenses in connection with the Conference, which is to be held in June next. The ballroom presented a gay appearance, many delightful fancy costumes representing advertised goods and advertised characters parading before the judges.

Mr. Victor E. Hanna acted as honorary secretary, and was ably assisted by the following committee:—*Chairman*, Mr. Denis J. Nugent, vice-president, P.S.I.; *Mrs. P. A. Brady*, *Mrs. T. J. Doyle*, *Mrs. Morrow*, *Mrs. W. Murphy*, *Mrs. D. Warich*, *Miss Costelloe*, *Miss A. Bouchier-Hayes*, *Miss Cox*, *Miss E. Griffin*, *Miss O'Flanagan*, *Miss M. D. Oliphant*, *Miss L. Thompson*, *Miss V. Thompson*, *Miss Hosford*, *Mr. F. J. Barragay*, *Mr. T. R. Bourke*, *Mr. E. J. Evans*, *Mr. P. J. Killachy*, *Mr. W. F. Herlihy*, *Mr. F. Meagher*, *Mr. J. V. McKeever*, *Mr. W. Murphy* and *Mr. M. J. Timoney*. The prizes were awarded as follow:—

For the most artistic Costume—1st prize (Hamilton, Long & Co., five guineas), Mr. Daniel Bridgeman, 48 North King Street, Dublin; 2nd prize (beautiful Giro Pearls, value 3 guineas), Miss Kathleen Brennan, 45 James's Street, Dublin.

For the most humorous Costume—1st prize (Hayes, Conyngham & Robinson, Ltd., five guineas, Mr. and Mrs. A. P. Rafter and Miss Drago (The Casey Family); 2nd prize (gold Gillette razor, value one guinea), Anthony Grogan, Athlone Hotel, Dublin.

For the most original Costume—1st prize (Vanity Kodak camera, value 8 guineas), Leo Darcy, 4, Enniskerry Road; 2nd prize (Palmolive Co., 2 guineas), Mrs. P. Forde, 29 Botanic Avenue.

For the best historical Costume—1st prize (Mills & Co., 3 guineas), Miss Sally Hayes, 2, Rathmines Road, Dublin; 2nd prize (McClinton, Ltd., one guinea), Joseph O'Reilly, Lower Leeson Street, Dublin.

For the most original Lady's Costume representing Ovaltine—1st prize (5 guineas), Miss Claire Conlan, York Road, Dublin; 2nd prize (2 guineas), Miss M. Darcy, 4 Enniskerry Road; 3rd prize (1 guinea), Miss N. Sheridan, 96, Talbot Street, Dublin; consolation prize, Mrs. G. Davidson, 1 Xavier Avenue, Dublin.

For the best Costume representing Butywave Shampoo—1st prize (5 guineas), Mrs. G. McGettrick, 5 O'Connell Villas, Dublin.

Representing Premier Vinolia Soap—1st prize (5 guineas), Miss Agnes Mangan, 17 Upper Merrion Street.

Two consolation prizes won by Miss E. Carroll, 11, Leinster Street, and Mrs. Swan, 5 Carleton Terrace, Rathmines.

Representing Kolynos Dental Cream (5 guineas)—Miss E. Griffith, 20 Haddon Road.

Wincarnis (5 guineas)—Miss E. McInnally, "Cathkin," Sutton.

B. and I. Passenger Service (5 guineas)—Leo Darcy, 4 Enniskerry Road.

Pears' Soap (5 guineas)—Miss L. Gilligan as "Golden Glory." Two consolation prizes—Miss Frances Kelly, 25 Haddon Road; Miss U. Wills, 43 Wellington Road.

Phosferine (1 guinea)—H. McInnally, "Oakwood," Sutton.

A special Butywave competition for prizes value 20 guineas was held, with Mr. Maurice Sibbles, Mr. Arthur Forster and Mr. Narin as judges.—1st prize, Miss R. Hopkins, Wellington Lodge, Booterstown; 2nd prize, Miss Violet Jackson, 140, Phibsboro' Road, Dublin; 3rd prize, Miss Eileen Hughes, Norfolk Villa, Sydenham, Belfast; consolation prize, Mrs. Nora Breen, 28 Pembroke Road, Ballsbridge.



Left to right: Mr. R. R. BENNETT, Mr. D. L. KIRKPATRICK, Mr. W. J. HARDY

Inquests

An inquest was held at Leeds, on April 17, on the body of Dorothy M. Smith, aged three, who died from strychnine poisoning. The father said that Easton's syrup tablets had been kept in a drawer, and since the death of the child he had found some of the tablets in the bottom of the drawer. The deputy coroner remarked that he wished to draw the attention of the public to the fact that such tablets, which are being commonly sold to mothers, are dangerous, and should be kept out of the reach of children. A bottle containing such tablets should be prominently labelled "Poison." A verdict of "Death from misadventure" was returned.

The Islington (London) coroner concluded, on April 23, an inquest on the body of Walter W. Archer (*C. & D.*, April 6, p. 405). Dr. G. R. Lynch said that he had found traces of mercury in the boy's organs. There was $\frac{1}{2}$ gr. in the kidneys, and he thought mercurial poisoning was the cause of death. There were two similar cases on record. Sir Bernard Spilsbury said that he concluded that death was due to syncope resulting from acute colitis brought about by mercurial poisoning. The coroner, in recording a verdict of "Accidental death," said that definite instructions were given with the powders at the hospital, but he came to the conclusion that the child took an excessive number of them.

At Barrow-in-Furness, on April 20, an inquiry was held concerning the death of the Mayoress, Mrs. Whinnerah, whose death was due to poisoning. Hilda Mary Todd, chemist and druggist, a director of the North-Western Drug Stores, Ltd., said that on April 19 Mrs. Whinnerah came into the shop and said she wanted some strychnine to kill rats. Witness told her they could not sell strychnine by itself, and offered her various kinds of rat poisons, including a packet of vermin killer. The deceased signed the poison-book. The packet of vermin killer contained 20 gr. of powder and 10.5 per cent. of strychnine. The coroner's finding was that the deceased poisoned herself while of unsound mind.

At an inquest held on April 19 on the two-year-old son of Mr. Buckley, Clifton Street, Prestwich, Manchester, evidence was given by Mrs. Buckley that on the previous Tuesday the child came to her with three pills in his hand. He had, she afterwards found out, taken them from a box supplied to her husband by a doctor. She had no idea that they were poisonous, but afterwards saw the boy in convulsions. Dr. Burbridge, the practitioner in question, said he always put up pills containing poison in red boxes, and he might not have mentioned strychnine to Mr. Buckley when he supplied him with them, but he told him to be careful. They contained $\frac{1}{16}$ gr. in each. The hospital doctor said he had calculated that in the case of a two-year-old child $\frac{1}{16}$ gr. would be fatal. The coroner, in recording a verdict of "Death from misadventure," said that the legislature had not provided that medicines supplied to patients and containing poisons must be labelled as such, but it would have been safer if in such a case the doctor had specifically warned the parent against the danger of leaving the pills about.

The Croydon coroner resumed, on April 18 and 22, an inquest on the body of Mrs. Violet A. Sidney (*C. & D.*, April 20, p. 463). While a daughter of Mrs. Sidney was under examination on April 22, the coroner decided to interpose the evidence of Mr. Frederick Sandford Rose, chemist and druggist, South Croydon. Mr. Rose said that from time to time he had made up the prescriptions of Dr. Elwell, and received one from him on February 20 for Mrs. Sidney. The prescription was metatone, which consisted of phosphates of calcium, manganese, potassium and sodium with strychnine and vitamin B. The Coroner: What is the proportion of strychnine?— $\frac{8}{500}$ gr. to every ounce. The coroner held up a small bottle, and this was identified by Mr. Rose as that in which he made up the prescription. The label on the bottle was written by his senior assistant. The Coroner: All you did was to pour out from the large bottle into the small medicine bottle?—Yes. And the small bottle was perfectly clean?—Yes. I am positive of that. After you had dispensed the metatone into the medicine bottle it was perfectly clear?—Yes. How do you know?—Practically every bottle is held up to the light. But this bottle

might have been one of the exceptions?—No; I remember seeing the bottle on the counter with others. After you had filled it with metatone?—Yes. Was it clear then?—Yes. It was quite clear. Then it was taken from the dispensary into the shop. There each bottle is held up to the light to see if there is any sediment or undissolved crystals of any kind. That is the usual way before it is wrapped up. Who does that, one of your assistants?—Yes. Mr. Rose said he had been unable to ascertain which of the four boys he employed had delivered the medicine. The large bottle from which he dispensed the metatone was nearly full at the time, and afterwards most of it was served to other customers. The Coroner: There were no complaints from any of them?—No. Have you ever noticed any sediment in metatone?—No. Have you ever tasted it?—Yes. Could it be described as having a gritty taste?—No, certainly not. Are you able to say whether you supplied arsenic or anything containing arsenic to Mrs. Sidney?—I did not. Was it a new bottle?—I don't think so. Would it be possible for any arsenic to get into this bottle by mistake before it left your shop?—It would be absolutely impossible. Mr. Rose said that Mrs. Sidney must have taken the metatone in very spasmodic doses for it to have lasted until March 5. Mr. H. Glyn-Jones (who appeared on Mr. Rose's behalf): You do a very large dispensing business?—I do. You have frequently dispensed metatone?—Yes. You are familiar with its appearance at the time?—Yes. If there had been anything unusual in the appearance of the metatone could you have failed to notice it?—I don't think it is possible not to have noticed it. If the bottle had been dirty I could not have failed to see it. The witness added that he personally examined every dispensing bottle, and that all the arsenic for dispensing purposes was always kept under lock and key. The assistants never had the key. Mr. Glyn-Jones: The solid arsenic in the form of weed-killer is kept in a different part of the shop?—Yes. It is not kept in the dispensary. When you have filled a bottle of metatone—which is a red fluid—have you anything to do except put a cork in and have the bottle labelled?—No. And you always do that at once?—Yes. Mr. Rose told the coroner that it was the usual practice to send out bottles wrapped in paper and sealed. "I am not fond of evidence of usual practice," said the coroner. "We all know there are exceptions to usual practices." The inquest was again adjourned.

Wills

MR. WILLIAM GEORGE ROBERTSON, Ph.C., of Edenfield, Cupar, left personal estate in Great Britain valued at £13,647 0s. 4d.

MR. R. VIVIAN, chemist and druggist, Morrab Road, Penzance, left estate valued at £2,171 gross, with £2,130 net personally.

MR. GEORGE FREDERICK BARRATT, of 261 Coldharbour Lane, Brixton, chemist and druggist, left estate of the gross value of £1,619 13s. 8d., with net personally £1,547 9s. 8d.

MR. JOHN GEORGE, of Proud Cross, Kidderminster, chemist and druggist, who died on February 3 last, aged seventy-eight years, left estate of the gross value of £4,859 0s. 8d., with net personally £2,343 7s. 11d.

MR. WALTER CHAPMAN, of The Firs, Old Walsingham, Norfolk, retired chemist and druggist, formerly in business in Yarmouth and Wells, who died on January 10 last, aged eighty-two years, left estate of the gross value of £4,259 5s. 8d., with net personally £4,149 12s. 1d.

MR. RICHARD GUYER, chemist and druggist, of 167 Mayfield Road, Edinburgh, who died on April 21, 1924, left personal estate in Great Britain valued at £2,892 6s. 11d., and probate of the will of June 6, 1899, has been granted to Mrs. Myra Guyer, of the same place, the widow.

MR. ABRAHAM KIRBY, of 63 Boscombe Road, Southend-on-Sea, Essex, lately manager of Parsons & Keith, indigo and shellac brokers, who died on January 29 last, aged 70 years, left estate of the gross value of £1,904 17s. 6d., with net personally £1,048 5s. 7d.

Pharmaceutical Society of Northern Ireland Council Meeting

THE monthly meeting of the Council was held on April 19, the president (Mr. W. J. Hardy) in the chair. There were present Messrs. Fred Storey, H. Todd, J. E. Connor, A. C. McBride, James Dundee, T. W. McMullan, M.P., R. I. Edwards, S. Gibson, S. S. Badger, W. E. Wilson, W. S. Taylor, John Maxwell, H. McRoberts, W. Martin, Dr. Fielden, Dr. Acheson, and Professor Small. Mr. D. L. Kirkpatrick (secretary) was in attendance.

EXAMINATION ARRANGEMENTS

The week beginning July 1 was confirmed as the date for the summer examinations, which will be held in the Municipal College of Technology.

Mr. BADGER moved: "That the resolution on the minutes under date May 21, 1926, that five examiners be appointed for the examinations under Schedule 2, Part IV, be rescinded."

Mr. TODD seconded.

The PRESIDENT said they were reducing the number of examiners by one, and the resolution was therefore necessary to put matters in order. The resolution was passed.

The following were unanimously elected examiners for the year:—

Pharmacy and Practical Pharmacy.—Theophilus Harper, M.P.S.N.I., F.C.S.

Pharmacognosy and Botany.—James Small, D.Sc. (Lond.), Ph.C., F.L.S., M.R.I.A., F.R.S.E.

Chemistry and Physics.—Henry Wren, M.A., D.Sc., D.Ph.

Business Methods.—Frederick G. Walsh, F.C.A.

EDUCATION COMMITTEE

The report of the Education Committee stated:—

The following, who submitted certificates from the undermentioned body, were granted the certificate of apprentice to a pharmaceutical chemist:—Agnes Jane Erwin, 23 Hill Street, Ballymena, Junior Grade certificate, Ministry of Education, 1928; Samuel Henry Nevin, Bellemont, Coleraine, Junior Grade certificate, Ministry of Education, 1926.

A letter was read from Mr. P. J. Brennan, principal of the Technical School, Omagh, stating that the Ministry of Education had sanctioned the appointment of Mr. H. Kyle, M.P.S.N.I., of Omagh, as teacher of botany, but Mr. Kyle had refused to act. It was suggested that the secretary should see Mr. Kyle and endeavour to get him to act.

On the motion of Mr. McBRIDE, seconded by Mr. DUNDEE, the report was adopted.

MR. McMULLAN'S RETIREMENT

Mr. STOREY referred to the retirement of Mr. T. W. McMullan from the Northern Parliament, and said they should not allow the occasion to pass without acknowledging his services, especially in connection with the Pharmacy Bill. He gave tremendous time to it, and had always been at their disposal interviewing the Minister of Home Affairs and introducing them to various departments of the Government. His retirement was a great loss to the Society, and he (the speaker) begged to move that a resolution recording his invaluable services be placed on the minutes of the Council. It was to be all the more regretted that his retirement was for health reasons, but they hoped that he would be long spared to sit on the Council.

Mr. TODD, in seconding, said he knew the extent of Mr. McMullan's services to the Society. Although he would not be a member of the next Parliament, they would still have him on the Council, and he would do all he could in the interests of the Society.

Mr. CONNOR supported the resolution, stating that the country members looked on Mr. McMullan as one of the best representatives in Parliament. It was a disaster that he was not going forward again. He was respected not only in the city but throughout the Province.

Mr. McBRIDE joined in supporting the resolution, expressing regret that Mr. McMullan was not going into Parliament again. He would be a tower of strength to the Society still, and they hoped to see him often at the Council.

The PRESIDENT, in putting the resolution, said that Mr. McMullan was a man who always gave sound advice. The name of his firm was one to conjure with in the Six Counties. He had been their spokesman on all occasions with the Government, and had obtained concessions which would not otherwise have been obtained.

The resolution was passed by acclamation, and Mr. McMULLAN, in reply, said he felt quite overwhelmed by the speeches that had been made. It was a great gratification to have such a generous acknowledgment of any little service he had rendered to the Society. He was greatly interested in the Society; he was proud of it, and had always fought for it in the House of Commons. He would still continue to do all he could for the Society. (Applause.) The Home Minister had spoken to him on the last occasion he was in Parliament of the success of the Pharmaceutical Society, which he described as one of the most successful bodies set up by the Government.

MEMBERS ELECTED

The following nominated candidates were elected members of the Society:—Andrew Hamilton Cooke, 7s. Bond's Hill, Londonderry; Lionel Firth, 3 Seapark Terrace, Holywood; Charles Albert Thompson, 70 Bow Street, Lisburn; Hubert Young Fergusson, 2 Carlisle Road, Londonderry.

New Books

Austin-Leigh, E. C.—*A List of English Clubs in All Parts of the World for 1929.* 6½ in. by 4 in. Pp. 197. 7s. 6d. Spottiswoode, Ballantyne & Co., Ltd., New Street Square, London, E.C.4. [This is the thirty-seventh annual edition of a list of English clubs, and the information contained in it extends to 3,950 clubs in London, the Provinces and various parts of the world. Special attention has been given to golf clubs, of which no fewer than 1,750 have been included.]

Index to the Minutes of the Dental Board. 8½ in. by 5½ in. Pp. 47. Constable & Co., Ltd., 10 Orange Street, Leicester Square, London, W.C.2. [This is a general index to the minutes of the Dental Board of the United Kingdom, 1921-28 (inclusive of both years), volumes 1 to 7. The preface states that the Board has found it desirable to have an index to their minutes; this volume has been prepared, and will be issued annually with the bound volume of the minutes.]

The Chemical Manufacturer's Directory for 1929. 8 in. by 5 in. Pp. 211. 4s. 6d. net. Simpkin, Marshall, Ltd., Stationers' Hall Court, London, E.C.4. [Sixty-one editions of this useful handbook have now been published and the standard of accuracy is maintained. All the principal manufacturers of chemicals in England, Wales and Scotland, with some of the Irish firms, are listed, and the subject-matter has been still further condensed, so that there are six pages less than last year.]

Grassmann, W.—*Neue Methoden und Ergebnisse der Enzymforschung.* 10 in. by 6½ in. Pp. 149. Marks 12.60. Verlag von J. F. Bergmann, Munich. [In this monograph the author describes the investigations on enzymes carried out by R. Willstätter, and discusses the theoretical considerations arising from his results. The first part deals with the quantitative determination of enzymes, their activation and inhibition, while the second part is devoted to a description of the methods adopted for their isolation and purification. Willstätter bases his experimental work on the assumption that the agents producing enzymatic reactions are bodies the chemical identity of which is unknown, but that by determining the velocity of the reactions produced under their influence it should be possible to determine quantitatively the chemical individuality of the various enzymes, and the author seeks to demonstrate to what extent this assumption has been found acceptable.]

Legal Reports

Interest on an Overdue Account.—In the Glasgow Sheriff Court, recently, T. & H. Smith, Ltd., manufacturing chemists, sued Mr. W. S. Brown, chemist and druggist, Cathcart, for payment of an account for drugs and proprietaries. The account was overdue, and Messrs. Smith included in it a sum for interest. Mr. Brown tendered payment of the account less the sum charged for interest. Messrs. Smith refused to take the account less the interest. The pursuers based their claim for interest on the terms and conditions of sale stated in the Scottish Wholesale Druggists' Patent Medicine and Proprietary Articles Catalogue. The catalogue states:—"The prices quoted are for monthly payments. Accounts will be rendered at the close of each calendar month following. If not paid by that date, the sum of 10d. per £ sterling will be added to overdue accounts, and if the total amount of the whole account is not paid within four months an additional 6d. per £ sterling (2½ per cent.) will be charged." It was not proved that the defender had received the price list, or that he knew of the conditions printed. The pursuers' invoices and statements of account bore no reference to the price list, although they contain printed statements as to other conditions of sale. It was proved or admitted that the goods had been ordered in the usual way without any reference to price lists or terms. The defender produced discharged accounts by the pursuers and by other wholesale druggists showing that although the accounts were overdue in terms of the condition quoted, no interest had ever been charged. The sheriff found that the pursuers had failed to prove that the sales were made upon the condition quoted, and dismissed the case, with expenses to the defender.

Orange Quinine Tonic.—At Old Street Police Court, London, on April 23, Winter's (Chemists), Ltd., Downs Road, E., were summoned for having sold at 324 Bethnal Green Road orange quinine wine which was deficient by 17 per cent. in quinine hydrochloride, and entirely deficient in orange wine. Mr. Hornby prosecuted, and Mr. H. Glyn-Jones, barrister, defended. Mr. J. G. Weeks, the inspector, said that when he unwrapped the bottle he saw that there was a label, "Orange Quinine Tonic." Mr. Glyn-Jones: Did you expect your agent to get a bottle of the size containing 12 per cent. of alcohol for 1s. 6d.? Mr. Septimus T. T. Pattinson, chemist and druggist, managing director of the defendant company, said that the price of the quinine wine of the British Pharmacopoeia was 3s. 4d. a bottle, and of orange and quinine tonic 1s. 6d. a bottle. The agent asked for a bottle of orange quinine wine. When some of his customers asked for orange quinine wine he found that they meant his tonic. Mr. Glyn-Jones submitted that apart from anything else, the label on the bottle was quite sufficient, and there could be no conviction. The magistrate said it was perfectly clear there was a misunderstanding between the parties, and no intention on the part of the defendants to defraud anyone. The summons would be dismissed.—At the same court, Ascott's Pharmacies, Ltd., Harrow Road, W., were summoned for selling at 168 Green Street, E., orange quinine wine which was deficient by 17 per cent. in quinine, and entirely deficient in orange wine. Mr. H. Ricketts, defending, said in view of the fact that there was no orange quinine wine mentioned in the British Pharmacopoeia, the agent asked for something which did not exist, and the unfortunate chemist had to do the best he could in the circumstances. This summons was also dismissed.

Breach of Contract Alleged.—In the Outer House of the Court of Session, Edinburgh, recently, an action was tried in which John Gibson, farmer, Auchtermuchty, sued Robert Miller & Co., Ltd., West George Street, Glasgow, for payment of £1,350 in respect of damages. The pursuer stated that in January 1928 he purchased from the defenders, through an agent, two tons of cake, and that in terms of the contract the defenders were bound to deliver the cake at Auchtermuchty Station in good order and condition. The cake was packed in jute bags. On February 17 thirty-seven of the pursuer's

cattle were being fed, in addition to hay and turnips, each with 3 lb. of the cake daily, and on that date ten other cattle were also given a feed of the cake. On the following morning the pursuer discovered that four of the cattle which had been fed on the cake were dead. Examination by a veterinary surgeon showed that the deaths were due to an irritant poison. The pursuer lost thirty-one beasts in spite of all his efforts and treatment. All the cattle that died had been fed on the cake, and none of the remainder of the stock which had not been fed on the cake was ever ill. The defenders explained that on an analytical examination of the cake supplied to the pursuer no trace of poisonous matter was disclosed. Poisonous matter was, however, discovered to be mixed with the cake and other feeding materials found in the pursuer's cake-house subsequent to the death of the cattle. They stated that they took all reasonable and proper precautions. Dr. J. F. Tocher, F.I.C., Ph.C., stated that he found arsenic in all the samples of the stomach contents of the beasts. He calculated that each animal must have consumed 28 gr.; 10 to 12 gr. would be a fatal dose. It was his opinion that the yellow powder found among the cake dross was an arsenical sheep dip. One of the bags in which the cake was delivered was different from the others, and it appeared to have been used more. In it he found 60 gr. of arsenic. In a further sample of the yellow powder which he got he was able, in a comparison with Cooper's sheep-dipping powder, to show that the two powders had approximately the same composition. A paste dip such as the pursuer said he used would never turn into a powder. Cross-examined, Dr. Tocher estimated that there must have been about a pound of the yellow arsenical powder, containing approximately 4½ oz. of arsenic, mixed with the various materials which he examined. It was a feasible theory that the bag had been used for carrying loose sheep-dip powder, and had been returned to the company with some left in it. Giving judgment on April 22, Lord Fleming accepted the defenders' evidence that their general system was to use only new bags for cake. His lordship did not hesitate to say that the pursuer's theory was perhaps more probable than any of the other alternatives, but it presented substantial difficulties; and though he regarded the case as a narrow one, he had come to the conclusion that it would not be safe to accept it as the basis of his judgment. He, therefore, found that the pursuer had failed to prove that the damage was due to the fault of the defenders. It followed that the defenders were entitled to be assuaged with expenses.

New Companies and Company News

P.C. means Private Company and R.O. Registered Office.

GRIP PASTE Co., LTD. (P.C.).—Capital £1,000. Objects: To carry on the business of manufacturers of and dealers in glues, pastes, gums and adhesives of all kinds, etc. The subscribers are: A. Davies, C. Farr. R.O.: 53 Downs Road, Clapton, E.5.

HAYWARDS MINERAL WATER Co., LTD. (P.C.).—Capital £8,000. Objects: To acquire the business of a mineral water manufacturer, etc., heretofore carried on by Mrs. C. Hayward, at 43 and 45 Milton Street, Maidstone, as "W. Hayward." The directors are: F. W. Byner and J. C. Hubble. Secretary: A. A. Goate, St. Helens, Tonbridge Road, Maidstone.

RADIUM COMPOUNDS, LTD. (P.C.).—Capital £1,000. Objects: To carry on the business of manufacturers, refiners, importers and exporters of and dealers in radium, radio-active compounds, minerals and materials, luminous paints, pharmaceutical chemicals and products, perfumes, toilet preparations, etc. The directors are: G. Owen and B. Davidovitch. R.O.: 68 Victoria Street, S.W.1.

CLIFTON INSTRUMENTS, LTD. (P.C.).—Capital £100. Objects: To carry on the business of manufacturers of, agents for and dealers in scientific, anatomic, orthopaedic, surgical, optical and dental instruments, apparatus and appliances of all kinds, etc. The directors are: L. H.

Matthews (managing director), 37 Cornwallis Crescent, Clifton, Bristol (director Matthews Laboratories, Ltd.), B. H. Cabot Matthews, and J. Brooke.

W. J. RENDELL, LTD. (P.C.).—Capital £12,000 in £1 shares. Objects: To acquire the business of manufacturing druggists' sundries now carried on by F. J. Ward, D. J. H. Ward and W. J. L. Watts as "W. J. Rendell," at 15 Chadwell Street, Clerkenwell, and elsewhere. The permanent directors are: F. J. Ward (managing director) and D. J. H. Ward. R.O.: 15 Chadwell Street, E.C.1.

SAYERS (CHEMISTS), LTD. (P.C.).—Capital £1,000. Objects: To carry on the business of manufacturing and/or dispensing chemists, druggists, opticians, drysalers, etc. The permanent directors are: L. A. Garratt, 3 Greenholm Road, Eltham, S.E.9; Kate L. Castle, 214 High Road North, East Ham; and H. Jones, 41 Burdett Road, Mile End, E.3. R.O.: 2 Obelisk Parade, Lewisham, S.E.13.

HOOPERS DRUG STORES, LTD.—At a meeting held in London on April 10 it was resolved that this company be wound up voluntarily. Mr. S. R. Cheriton, "Whitecroft," Furze Road, Kingswood, Surrey, was appointed liquidator.

CHEMICAL & WOOD INDUSTRIES, LTD., was registered as a "public" company on April 15, with a nominal capital of £1,000,000. Objects: To acquire a majority of the shares in Destilacija Drva D.D., of Zagreb, Yugo Slavia, and to carry on the business of artificial silk manufacturers and merchants, manufacturers of and dealers in chemicals, etc. The subscribers are: S. Stebbing, Daisy A. Piander, Mary Segel, and four others. Solicitors: A. M. Oppenheimer, 31 Queen Victoria Street, E.C.4.

BENGER'S FOOD, LTD.—The directors have declared the following dividends for the six months ending March 31, 1929:—On the £5 Preference shares at the rate of 6 per cent. per annum, less tax, to be payable May 1, 1929; on the £1 Ordinary shares at the rate of 1s. 3d. per share, free of tax (making 2s. for the year ending March 31, 1929), to be payable May 10, 1929.

LEWIS & PEAT, LTD.—The net profit for 1928 was £39,954, against £63,705. The sum of £27,500 has been appropriated in respect of dividends on preference shares, and the directors recommend a final dividend on ordinary shares of 5 per cent., making 10 per cent., against 25 per cent., transferring to reserve £5,000, against £10,000, and carrying forward £24,246, against £21,793 brought in.

BARCLAY & SONS, LTD.—The profit for the year 1928, including £1,465 4s. 9d. brought forward, is £8,501 5s. 2d., out of which has been paid interest on debentures, £640 7s., leaving a balance of £7,860 18s. 2d., which the directors recommend should be applied as follows:—To pay a dividend at the rate of 6½ per cent. on the preference shares, less tax, £1,749; to pay a dividend at the rate of 6½ per cent. on the ordinary shares, less tax, £958 11s.; to reserve for income tax £1,250; to write off capital expenditure £300 10s. 4d.; to carry to reserve £2,000; to carry forward £1,602 16s. 10d. Mr. H. M. Davenport retires from the Board, but being eligible offers himself for re-election.

LEVER BROS., LTD.—The annual general meeting was held on April 18 at the Lyceum, Port Sunlight, Cheshire, Mr. Francis D'Arcy Cooper presiding, and in the course of his speech he said they would note that although the profits for the whole of the business had decreased by £116,212, by a coincidence the yield from associated companies had been maintained during the year at 9.6 per cent. This slight decrease in profits is caused by a continuance of the slump in the price of glycerin, and by the heavy advertising cost of launching in this country their new Lux toilet soap, which has proved a great success. The soap was only launched on September 3 last year, and they were already confident that it has the largest sale of any toilet soap in Great Britain. All introductory expenses and all advertising expenditure up to date have been recovered and the line is already on a profit-earning basis. This was an excellent achievement and reflected great credit on their sales organisation. (Hear, hear.) Although the sales had

been in excess of their expectations, the article itself merited it. As a matter of interest he ventured that the number of tablets of Lux toilet soap sold during 1928, at home and abroad, totalled 131,800,000 tablets—(applause)—of which 119,000,000 were sold in the United States and Canada, where the soap had been on the market for several years. Notwithstanding this large output of Lux toilet soap in the home market, and that there is no cessation of competitive effort either from home or foreign makers, their toilet companies had maintained their progress, and in 1928 increased their net profits. Imports of foreign toilet soaps in the last half-dozen years show little difference as to tonnage and some reduction in declared money value. Exports of toilet soaps from the United Kingdom show an increase on the preceding year and again exceed imports. Trade in Great Britain has been fairly satisfactory, prices of raw materials having again been slightly to the advantage of the soapmaker, although, as already mentioned, the price of glycerin—the most important by-product of the soap manufacturer—is again depressed. Whereas at December 31, 1926, the market price of crude glycerin was approximately £75 a ton, to-day it is nearer £30 a ton. Full provision had been made in their accounts for writing down glycerin stocks. Last year he referred to the use of glycerin in motor-car radiators as an anti-freeze. Since that date "Zero" radiator glycerin has been marketed by one of their associated companies, and has met with a popular reception. An initial advertising campaign was embarked upon with the view of educating the motor users of this country to the value of glycerin as an anti-freeze. It is early yet to appreciate the full value of this campaign; but the company has definitely made an advance in exploring this additional use for glycerin, which although comparatively new to this country represents a large consumption in the United States and Canada. They would be equally interested to know that one of the largest motor-bus companies was among the users who found glycerin essential as an anti-freeze during the period of frost. Further uses of glycerin as an anti-freeze are being developed in connection with "home electric lighting sets" and in the drying of gas for municipal lighting, the moisture in which has always been a source of trouble in the mains. Sales of soap at home and abroad show an increase of 35,494 tons, the largest increase they had had for several years. This proves that the products of the parent company and its associated companies are still widening their appeal to the public.

Bankruptcy Report

Re Sidney Herbert Travis (trading as S. H. Travis & Co.), manufacturing chemist, 33 King's Road, St. Pancras, London.—A general meeting of creditors was held recently at the London Bankruptcy Court to consider a proposal for the payment of a composition, under the terms of which, out of a sum of £1,500 (guaranteed), preferential debts will be paid in full, and a composition of 5s. in the £ on all provable debts except those in respect of which creditors have agreed to a reduction of the amounts respectively due to them, on which a composition of 5s. in the £ will be paid on the reduced amounts. A vote having been taken, the Official Receiver reported that the resolution to accept the proposal had been carried by the statutory majority.

Private Arrangement

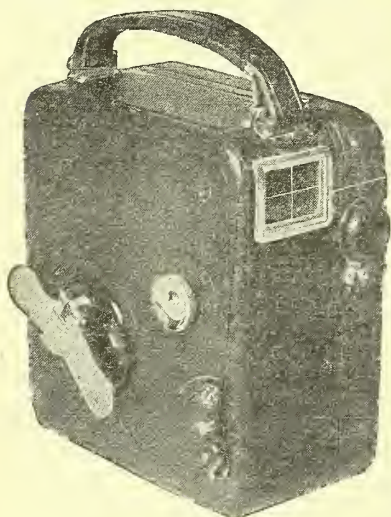
R. J. Burton, lately trading at High Street, Ashwell, chemist and druggist.—A meeting of the creditors was held recently at the offices of Mr. R. Hartley, solicitor, Royston, when it was reported that the business had been sold. The liabilities were £892 15s. 10d., against assets comprising cash in hand £424 14s., book debts £19 16s., and life policy £51 16s. 10d., making a total of £497 6s. 10d. After allowing £39 6s. for preferential claims, the net assets were £458 0s. 10d. It was reported that the debtor had been in business for the last fourteen years, but owing to the illness of himself and his wife, the turnover had declined during the last two years. An offer was made of a cash composition of 10s. in the £, which was accepted.

Amateur Ciné Business

A series of articles on an increasingly popular hobby, the business possibilities of which should not be overlooked by photographic chemists

I.—The Customer's Choice

THE growth of amateur cinematography in this country may be said to date from 1923. The factor responsible for the phenomenal increase which has occurred in so short a time is the great cheapening in the cost of production of the pictures, due to the introduction of film of a smaller size than hitherto available. Prior to that date, the film (generally referred to as standard or 35 mm.) and apparatus on the market was that



THE PATHÉSCOPE MOTOCAMERA

used for professional work; consequently owing to the high cost cinematography as a hobby was impossible for amateurs, except for those of comparatively unlimited financial resources. The advent of sub-standard film brought this branch of photography within popular reach, while the expense of home picture production has been still further lowered by obtaining the positive image by reversal

instead of printing it from the negative. Early in 1924 the *C. & D.* called the attention of photographic chemists to the business possibilities arising from this new departure, and a brief account of the apparatus on the market in 1926 was given when the *C. & D.* book, "The Photographic Chemist," was published. During the past few years enormous strides have been made, and to-day, if the price of apparatus is not such as to suit all pockets, at least there is sufficient variety to meet the needs of anyone who can really afford to do much ordinary (still) photography. For instance, the cost of the taking apparatus for motion pictures may range from over £50 to £5, and while obviously the possessor of the lower-priced camera does not enjoy all the advantages of the person who owns the other one, he has nevertheless an efficient instrument which is capable of producing pictures suitable for projecting on a 3 ft. by 2½ ft. screen at a distance of 10 ft. When selling an apparatus it should be remembered that, as in ordinary photography, the novice is far more likely to obtain satisfactory results from one with a minimum of operating controls rather than a more elaborate one. It is not suggested that all photographic chemists should forthwith carry a stock of ciné cameras, projectors and accessories, but there are many who have made little or no attempt to divert into their tills a portion of the satisfactory profit which accrues from sales of these materials. In any case, for his own benefit and that of the trade as a whole, it is advisable that every chemist who is a photographic dealer should have at least a fair knowledge of the various makes of apparatus on the market, and the principles of cinematography generally.

THE FILMS

As a rule it will be found that the would-be purchaser of a motion-picture camera is bewildered by the choice of apparatus, and is often inclined to pay more attention to initial cost than to that of subsequent operating. Difficulties in connection with the former can usually be

overcome by means of the hire-purchase system, but as the price of the outfit in the first place is in a large measure governed by the size of film used, it is perhaps best to explain this first. Standard film need not be considered for reasons explained previously, so that there remain the sub-standard sizes of the 16 mm. and the 9.5 mm. (commonly known as 9 millimetre). Almost every amateur ciné camera and projector uses the former size, the notable exceptions being those of Pathéscope, Ltd.; however, the difference in the size of the picture is not proportional owing to the different arrangements of the perforations or "sprocket-holes," by means of which the film is propelled. As will be seen from the illustration, the pictures or "frames" on the 9 mm. are relatively larger. Fig. 1 shows a strip of standard film, the width of the picture on which is 24 mm., the other 11 mm. being used to accommodate the sprocket holes, of which there are four on either side. Fig. 2 represents the 16 mm. film. This somewhat resembles the standard size, except that there is only one perforation per picture, which in this case is 10.5 mm. wide. Lastly (Fig. 3), there is the Baby-Ciné film, which, it will be noticed, differs considerably from the other two, the picture being 8.5 mm. in width. For practical purposes only two makes of sub-standard film need be considered, namely, that of Kodak, Ltd., in the 16 mm. and that of Pathéscope, Ltd., in the 9 mm. size. In each case there are three kinds available, namely, negative, positive and direct reversal, but as it rarely happens that an amateur requires more than one film of a subject, only the last-mentioned need be taken into account here. This, too, has an important bearing on the reduction in the cost of production of the finished pictures, it being much cheaper to convert the negative into a positive by reversal than to print a positive from the negative. The advantage of the latter method is that any number of positives can be produced if required. At this stage the cost of running can be considered. Ciné-Kodak orthochromatic film is supplied in spools of 50 ft. and 100 ft., the prices being 14s. and £1 6s. respectively (panchromatic is 32s. 6d. per 100 ft.). The Pathéscope film is sold in rolls of 30 ft. for 3s. 6d. (box of 3 for 10s.). These charges in the case of

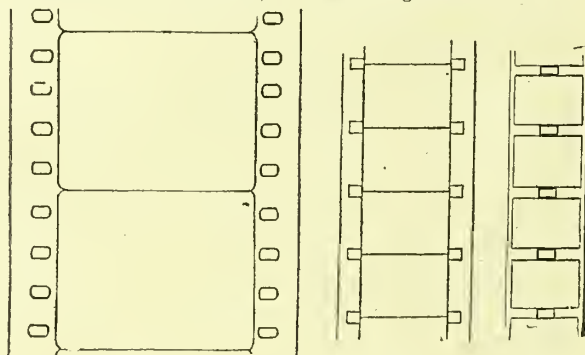


FIG. 1

FIG. 2

FIG. 3

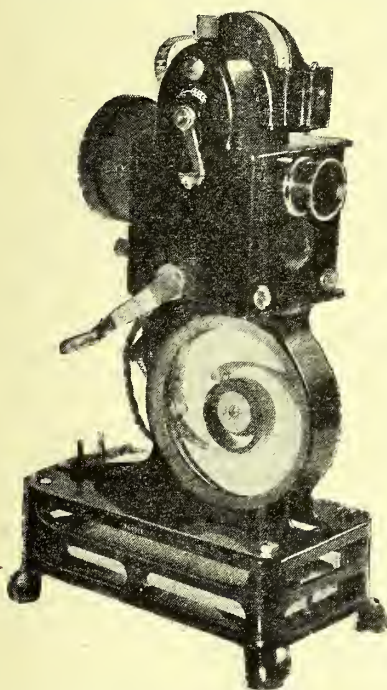
DIAGRAMS OF CINEMATOGRAPH FILM

Ciné-Kodak film include the cost of developing and making the positive by reversing, operations generally referred to as "processing," whereas with the Pathéscope film the manufacturers charge an additional 2s. for finishing a 30 ft. reel. There is yet one other matter to be considered before the cost of running can be gauged, i.e., the amount of time required to show a reel of film. This depends not upon length or "footage," but upon the number of pictures. A 100-ft. Ciné-Kodak film would contain about 4,200 frames, and requires just over four minutes to show; a 30 ft. Pathéscope film has approximately 1,000 frames, which suffice for roughly one

minute. It is now possible to get a relative idea of the cost of picture production, as shown below:—

	<i>Ciné-Kodak</i>	<i>Pathéscope</i>
Film, 100 ft. costs ...	26 0	11 3 (pro rata)
Processing ...	— —	6 8 (pro rata)
Projection time, approximately ...	4½ min.	4 minutes

At first sight it may seem that an exhibition costing about 4s. 6d. a minute is somewhat expensive, but as in

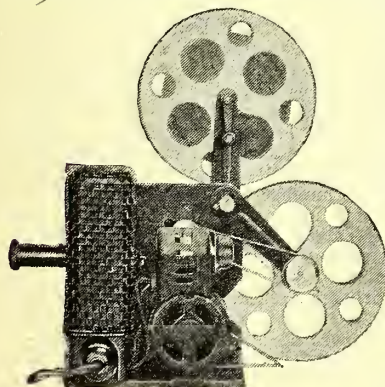


THE PATHESCOPE PROJECTOR

practice most "shots" or action scenes filmed by an amateur are found to last, on an average, about seven seconds, a 60 ft. reel of Pathéscope film on this rating would accommodate, say, fifteen to eighteen scenes, while at the same rate the Ciné-Kodak spool can be regarded as allowing thirty-five. Thus a shot lasting seven seconds contains 112 pictures, and costs 6½d. to 7d. If this is compared with what would be spent on a six-exposure 3½ in. by 2¼ in. film and one print, i.e., scene for scene (say, 1s. 10d.), it would be seen that it is "still" photography which is decidedly the saving in cost, the narrowness of the Pathéscope film has enabled the manufacturers to produce a camera of exceptionally small dimensions and weight. The latest development in connection with ciné film enables pictures to be projected in natural colours, which remarkable advance was described in the *C. & D.*, 1928, II, 223. The films have now been placed on the market by the manufacturers, Kodak, Ltd.

PROCESSING

The developing and reversing of the film may be undertaken by the amateur or the dealer, though in the case of



THE KODASCOPE

Kodak film this question does not arise, since the cost of processing has already been paid in the purchase price. The film can be sent to the company by the amateur, or he can send it through his dealer. Pathéscope, Ltd., on the other hand, not only undertake these operations in connection with their film (the company maintains a three-day service), but also cater for those desirous of processing their Baby Ciné film at home by supplying a special outfit for the purpose. Most people prefer to have the finishing

done for them, but there is a by no means inconsiderable proportion of amateurs sufficiently enthusiastic to do it themselves, as do also some dealers, and for this reason some formulas and notes on the operations are given. The developer recommended is as follows:—

Paraphenylenediamine (Pathé)	1 oz. 22 gr.
Caustic soda	150 gr.
Water	35 oz.

After development, which should not be continued for more than twenty-eight minutes, as beyond this the grain of the resulting image will be unduly increased in size, the film is rinsed and transferred to a reversing bath composed of:—

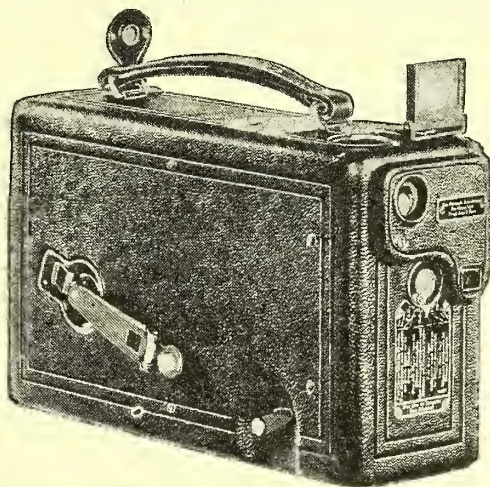
Potassium permanganate	30 gr.
Sodium bisulphate	380 gr.
(or sulphuric acid 170m)	
Water	35 oz.

After seven to ten minutes in this solution the silver image will have been removed. The film is then again washed and treated (in daylight) with the following clearing bath until the whites are transparent:—

Sodium bisulphate	75 gr.
(or sulphuric acid 35m)	
Sodium sulphite (anhyd.)	75 gr.
Water	35 oz.

The process being completed, 150 gr. of sodium hydro-sulphite is dissolved in the above solution, and on replacing the film in it darkening takes place. A final washing and a formalin hardening bath complete the process.

Alternative developers which have been found to work well include glycin and the metol-hydroquinone-borax one recommended by Wellington & Ward, Ltd., for their paper. The disadvantage of a new developer is that its factor must be found, since the factorial method is almost invariably employed in this part of the processing. That of the developing formula given above



CINE-KODAK MODEL B

is 18 (i.e., development is complete in 18 times the period taken for the first appearance of the image). An alternative formula, using ordinary chemicals and stated to be similar to the above, is:—

Paraphenylenediamine	10 gr.
Sodium sulphite (anhyd.)	45 gr.
Caustic soda	10 gr.
Potassium bromide	4 gr.
Phenosafranin soln. (1 in 1,000)	50m
Water	3 oz.

The factor is practically identical with that given previously.

It will be appreciated that in the course of exposing a reel of film parts may be over-, normally-, and under-exposed. As in still photography, so in cinematography, it is possible to modify the effect of excess or deficiency in this respect, a reason which probably accounts for the better average results obtained when the film is processed by the makers. It is quite possible for the

amateur to exercise a certain amount of control, but such matters will be dealt with later, as the amateur who has sufficient ability to undertake such operations is, as a rule, beyond the novitiate stage. The process used by Kodak, Ltd., is understood to involve a carefully graduated exposure to light between development and reversal.

APPARATUS

Having, then, decided on the size of the film, the choice of apparatus is narrowed somewhat, as in the event of the 9 mm. size being selected, the purchaser is practically confined to that of Pathéscope, Ltd. In the 16 mm. class there is plenty of variety both in cameras and projectors, but while manufacturers of the former also produce the latter, all makers of the latter do not supply the former, though companion apparatus is available from most of those companies whose products are best known in this country, including the following:—

BELL & HOWELL Co., LTD., 320 Regent Street, London, W.1, are the distributors in this country for one of the best-known makes of American cinematograph apparatus. In the 16 mm. type they offer the Filmo, which is sold at £57 10s. upwards; the Filmo 75, selling at £30; and the Filmo projector at £75, each complete with case.

HOUGHTON-BUTCHER (Great Britain), LTD., 88-89 High Holborn, London, W.C., are the makers of the Ensign Autokinecam and the Ensign Silent Sixteen, the camera and projector respectively, both of which were described in the *C. & D.*, 1928, II, 632.

KODAK, LTD., Kingsway, London, W.C.2, supply two models of cameras (known as A and B) and three projectors (Kodascopes A, B and C respectively). Owing to its portability Ciné-Kodak model B is the one preferred by most amateurs. In size it is about the same as a No. 3 Kodak camera folded, and is available at £18 18s., £25, and £31 10s., according to whether the lens fitted is *f*/6.5, *f*/3.5 or *f*/1.9. Model A is bulkier than the foregoing, and is generally used with a special tripod. All Ciné-Kodaks use 16 mm. film. The retail prices of the Kodascopes are:—A, £55; B, £89 10s.; C, £18.

PATHÉSCOPE, LTD., 5 Lisle Street, London, W.C.2, are the makers of one of the most popular "home movie" cameras in the world, the Motocamera, which sells at £10 10s. This ingenious instrument measures 4½ in. by 4½ in. by 2½ in., and weighs 3 lb. 2oz. It has a built-in motor and takes a 30 ft. reel of 9 mm. film. A similar camera with a hand drive instead of a motor sells at £5. The Pathéscope projector costs £6.

THORNTON-PICKARD MANUFACTURING Co., LTD., Altrincham, Cheshire, are the makers of the Ruby ciné camera and projector for 16 mm. film. The retail prices are £35 and £40 respectively.

New Books on Photography

The following notes deal with new books of interest to photographic dealers both for sale and reference purposes.

Abbott, H. B.—*Motion Pictures with the Baby Ciné*. 7 in. by 5 in. Pp. 121. 2s. 6d. Iliffe & Sons, Ltd., Dorset House, Tudor Street, London, E.C.4. [Although this book is primarily written for users of the Pathé, it contains much information of value to anyone interested in amateur cinematography, as instanced by the chapters on "The Principles of Cinematography," "The Subject of the Picture"; "Editing," and "Making Titles." So far as the Baby Ciné is concerned, the apparatus for taking and projecting is described, as well as the processing, and the faults which may arise during the various operations.]

Wall, E. J.—*Practical Colour Photography*. 8 in. by 5½ in. Pp. vii+280. 15s. Chapman & Hall, 11 Henrietta Street, London, W.C.2. [This is the second edition of this eminently practical manual of the various processes of colour photography, the first having been published six years earlier. In view of the late Mr. Wall's encyclopædic knowledge of colour photography, it is somewhat surprising to find no reference to the

Jos-Pé process, the Dyebro and the new colour films which are expected to be on the market next month, though there is a chapter on "Two Colour Processes, Bipacks and Tripacks." These omissions are possibly due to the book being produced in America. Nevertheless, a considerable number of revisions have been made, and they mostly reflect advances which have occurred rather than alteration of the information previously given, e.g., the new matter includes hypersensitising, the Duplex process and Lignose colour films. In regard to the last-named, they have appeared on and disappeared from the market during this period, their withdrawal being regretted by most of those who had used them. The book contains a chapter on colour cinematography.]

Wheeler, Captain Owen.—*Amateur Cinematography*. 8½ in. by 5½ in. Pp. xi+135. 6s. Henry Greenwood & Co., Ltd., 24, Wellington Street, London, W.C.2. [As a photographic dealer, a chemist is often called upon to advise a prospective purchaser in the choice of apparatus. Although the desire to possess is regarded as three parts of the way towards a sale, efficient salesmanship in a photographic business involves considerably more than ability to induce a customer to spend as much as, or a little beyond, what he can afford. To be in a position to give sound advice, the salesman should possess a good knowledge of the apparatus and a theoretical and practical acquaintance with the "gentle art." So far as cinematography is concerned, Captain Wheeler's book furnishes an excellent groundwork for the familiarity which a dealer should possess in order to be able to advise others. Following a brief but interesting historical introduction, the author proceeds to show how amateur cinematography has been rendered possible for persons of average means. A description is given of the various apparatus which is on the market at the present time for standard and for sub-standard film, and detailed directions are given for the processing of Baby-ciné film (it may be mentioned that a misprint of an "a" for "i" has occurred in the clearing bath formula on p. 72). Chapters XI to XV are devoted to film subjects, scenarios, libraries, slow motion pictures, editing, and other matters in which the dealer can with advantage be most helpful to the "cinamateur," who will also find the book a welcome addition to his library.]

Shepperley, William.—*A History of Photography*. 10 in. by 7½ in. 10s. 6d. Arthurs Press, Ltd., 34 Bloomsbury Street, London, W.C.1. [The historical side of photography as dealt with in this book ranges from the predecessors of the photograph to events which have occurred almost within the last few months. In compressing a century of photographic history into a single volume of this size there must arise many difficulties as to what should be included and which matters can be safely omitted. It was not the author's intention to deal with events in minute detail, and he has certainly attained his object of providing "a history of the Art which is not lengthy, stodgy nor abstruse." In some of the matters dealt with, however, there is much that is irrelevant, particularly in regard to trade matters, e.g., the paragraph on the Photographic Dealers' Association seems more like propaganda than history. On the other hand, there is scanty reference to the Zeiss Ikon A.G., whereas the events leading up to the formation of this company are of historical interest in its broadest sense. Another German firm which has been omitted altogether is worthy of mention if only for the number of patents taken out in recent years. After dealing with the discoveries of Niepce, Daguerre, Fox-Talbot and other early workers, this easily readable narrative passes to the invention of the dry plate, colour photography, the camera, the photographic lens, process printing, cinematography, and ends with a chapter on the future of photography. An extremely interesting feature of the book is the illustrations, which depict, among other subjects, the first photograph (daguerrotype) ever taken, the progress of the photograph between 1842 and 1890, and there are also examples of those taken in the past year or so. The pictures of cameras and lenses are pages of history in themselves. The portraits, too, are noteworthy, and include those of several people well known in professional and trade circles.]

A Developing and Printing Department

A North of England chemist who has twenty-five years' experience of D. and P. work outlines the procedure which should be adopted in conducting a business of this nature

IN view of the enormous increase in number of those who now possess cameras (and use them at every opportunity), the photographic chemist never had a better chance of utilising the opportunity to cater for this trade. One has only to visit the seaside resorts to notice the high percentage of visitors carrying cameras and note the numbers of customers in photographic dealers' shops to realise the large sums of money which must be expended by these people on snapshots. I can assure those chemists who are inclined to take up developing and printing work that it is not only a most interesting, but a profitable side-line. I use the term "side-line" because, unless the business is a side-line, sooner or later it becomes so huge an undertaking that one has to decide whether to instal a D. and P. works, or give up the management of the pharmaceutical business. The time has arrived when this has had to be decided upon by more than one chemist. There are many instances I could relate where a chemist has started the D. and P. business as a side-line, and it has become such a big proposition that he has given up pharmacy.

RECORDING THE ORDER

The first thing that arises after your customer hands you a film to be developed and printed is to enter the order in a receiving book, writing on the spool the corresponding number to your entry in the book. There are many ways of marking the film. Some dealers have a system of printed forms on which particulars are entered, such as, whether the film is a 6-8. or 12-exposure, and how many prints are required from each good negative. I do not consider it either good business or business-like at all not to charge the usual developing charges because a film happens to be a blank or fogged from end to end, and no prints can possibly be made from it. This film has cost just as much and entailed the same amount of trouble as if it were 100 per cent. successful exposure film, and therefore ought to be charged for. Reverting to the film numbering system, if one does not wish to invest in one of the many varieties of numbering machines on the market (some of which are very expensive), use can be made of a sharp-pointed steel gimlet-shaped implement. This is indestructible, and, if carefully used, the numbers show up very well after the film is developed and fixed. Another exceedingly good system is the one I saw in use at the Kodak D. and P. department, at Wealdstone, Harrow, and one that I certainly think is absolutely "fool proof." With this system the order form which comes attached (tied round or fastened by elastic band) to the spool or spools is taken off by an operator, the spool unrolled, and then the end of the film and the numbered portion of the invoice is placed on a table underneath a small pressure pad, which on being pressed down exposes a white light, and so registers on the film the order number belonging to it. This, on being developed, shows up very clearly, and is, undoubtedly, to my mind the best system of numbering films I have yet seen. My mind carries me back to the awful muddles that I have seen in various D. and P. departments, when one has been unable to decipher the number on the film, and on more than one occasion I have had to ask customers to pick their own snaps out of several orders which have been amongst "the unknown."

DARK ROOM ARRANGEMENTS

The developing room is a problem to most photographic chemists. The day has gone when one could put up with makeshift darkened "cubby holes." One must have plenty of room to work in, for if there is one portion of the D. and P. system that can be responsible for holding up the day's work it is the dark room, which should be, not only as large as possible, but well ven-

tilated. The films having been numbered, they are put into deep vertical tanks, a set of which should be kept together. Four tanks are better than three, as after developing, a rinse in water removes excess of developer, eliminates risk of stained films, and fixing proceeds more rapidly. The fourth tank, for final washing, may be outside the dark room, and is preferable so, if space permits, as the operator can then see whether they are sufficiently fixed. One learns many methods of dealing with these problems by visiting and seeing other D. and P. works, and one that I saw lately appealed to me greatly. After developing, washing and fixing had been carried out, the films (still on the same rods) were placed in a big washing tank about twice as long (but no deeper) as the developing or fixing tanks; at each end of this tank was a sliding door (a perfect light trap), so arranged that when the time requisite for washing was up the operator in the dark room pulled down his door on the inside of the dark room, and the operator on the other side lifted up the door on the outside and pulled all the washed films out. On closing the doors the arrangement automatically rang a bell. This seemed to me a grand finale to a perfect system in the installation of a developing, fixing and washing department. As regards the drying of the films, there are many good makes of apparatus for the purpose on the market, and they are almost as cheap as one can construct. I have seen many types, and one of the best I consider was a cupboard with glass doors on each side, with a series of arms on which the films were hung, warm air being admitted into the enclosure and a fan at the top extracting it. Quite simple arrangements can be satisfactory if the number of films is not too great, and drying can be carried on without great expense. In passing, I may say that to avoid trouble both in developing, fixing, washing and drying it is essential to have cages at the bottom of each tank or drying cupboard, so that any film which slips off the clip can be easily recovered. For the vertical tanks an improved type of xylonite safety cage is strongly recommended as it is unaffected by chemical solutions. If it is desired to make up the developer at home there is no reason why it should not be done, but to my mind it is preferable for the average man to buy a well-known brand of tank developer. In cold weather and during rush periods I recommend using what is known as "quick developer" (five gallons costs about 3s. 3d.). This is about double the strength of the normal developer costing 2s. 3d., and will develop two or three hundred spools.

PRINTING

After drying and cutting up the process of printing is entered upon. There are many brands of gaslight papers, and some prefer one make and some another. However, they all seem to be good and only require patience and perseverance to understand the little idiosyncrasies of each. Now for the printing machine. There are a number of excellent ones on the market, but the one I have seen most in use by the firms who turn out thousands of prints per day is the type at which three or four girls sit round a table, all the printing frames being illuminated from one central light of high illuminating power. It is surprising to see these girls get through from 150 to 200 prints per hour. For the smaller dealer, as I said before, there are a number of good printers that can be purchased new for about £4. These are extremely efficient, speedy and easy to use. Development is done with "M-Q" developer as a rule, the one recommended by the manufacturers of the particular brand of paper used being preferred. I have proved conclusively that one developer which produces excellent results with one brand of paper does not, as a rule, produce equally good results with another make of paper. Some printers I have seen get excellent results by having a large, deep dish, about 15 in. by 12 in., containing a "M-Q" developer of one-third of the normal strength; by this means

they are able to watch a large number of prints developing and, as a rule, have a less percentage of spoilt prints than if they used developer of the strength specified by the makers. Wash after developing in an adjacent dish, and, I may add here, never allow workers to dabble in the developer, washing water or acid fixing, but insist on the use of clippers—which are quite easy to use when once they have got into it. This precaution prevents endless trouble, and usually saves them from that peculiar and irritating skin complaint designated metol poisoning. After rinsing, the prints should be dropped into an acid fixing bath, and by means of a long paddle (or a piece of cotton wool tied on to a piece of vulcanite) should be moved about every few minutes. No prints should be allowed in this acid fixing more than ten or fifteen minutes. From there they are transferred to the washing department, where, after receiving a few changes of water, they are placed in either a cascade type of washer or a rotary washer. The latter is the latest idea in washers, and to my mind is the last word in "fool-proof" automatic washers. The trouble in the past has always been in having to depend on "the human element," but with the rotary washer the prints need no handling or changing from the time they are put in to the time they are taken out.

FINISHING

Test each batch of prints taken from the washer by pouring some water from the dish they are in to a measure into which a very dilute solution of permanganate of potash has been placed. If there is a minute trace of hypo this solution is turned into a reddish-brown colour; if the solution remains pink, the prints are free from hypo and are ready to be dried or glazed, which process, like the others, can be accomplished in many ways. The rotary dryer will dry hundreds of prints in a few minutes, and if glossy prints are required the ferrotypes on which they are squeezed can be put through the dryer or placed in a cupboard on shelves, at the end of which is an electric fan. An arrangement which has just been marketed consists of a metal stand with slotted steel frames to hold the ferrotypes, and an electric fan behind a heating apparatus drives hot air on to the stand, causing the whole of the framework to revolve slowly. Prints glossed on this are dealt with quite easily and expeditiously. Trimming, sorting out, placing the prints with the corresponding negatives in their envelopes, and finally checking the order number with the corresponding order number in the order book are the final touch to a piece of work that can either mar or enhance your reputation as one who is to be trusted by the snapshotter to "do the rest." Do not overlook an opportunity of pointing out negatives suitable for enlarging, or by placing the special negatives in an envelope with "prices of enlargements." This part of a D. and P. business is one of the most lucrative, and very often outweighs the small profit you have made out of the original order. If it is not possible for you to do this on the premises at first, you can send your orders to the people who cater for this profitable branch, until such time as you can cope with it.—NEMO (17/4).

DREM PRODUCTS, LTD., 37 Bedford Street, London, W.C.2, have placed on the market a new model of the Justophot exposure meter, which now contains a scale indicating the extra exposure necessary when using orthochromatic screens. The instrument was reviewed in the *C. & D.* a year or so ago, and since then many sales of it by photographic chemists have been made. Its use removes uncertainty from those exposures where the greatest uncertainty prevails.

A. ARNOLD & Co., 17 Elmcroft Avenue, Golders Green, London, N.W.11, have recently placed on the market a range of stop watches. Intended primarily for engineers, there are times when an instrument of this nature is required in a photographic operation. There are four models to choose from, each of which has a different distinctive feature. In one case the instrument is a stop watch only, while another can be set to ring an alarm. These chronographs are easy to operate and are guaranteed for periods ranging from twelve months to five years, according to the model.

Associations' Winter Session

Birmingham.—A meeting of the Birmingham Pharmaceutical Association was held at the Imperial Hotel on April 16, Mr. T. H. Foden (president) in the chair. About 130 attended. The chairman called on Mr. Marshall to introduce Mr. J. Keall and Mr. H. E. Chapman. Mr. Keall outlined the progress made by the P.A.T.A. since its inauguration by Sir William Glyn-Jones in 1896, and pointed out that the principle has now spread to many trades. Mr. Chapman explained that the P.A.T.A. was a tripartite organisation. He emphasised how essential the wholesale co-operation had been in the formation and successful working of the P.A.T.A. Questions put by Messrs. Goodman, Hampton, Blore, Izon, Gardner, Callow and Cox were replied to by Mr. Keall. A vote of thanks was accorded to the speakers on the proposal by Mr. Maurice Smith.

London (S.W.).—A lecture was given on April 16 by Mr. G. R. Boyes, Ph.C., B.Sc., A.I.C., entitled *Bacterial Materia Medica*. This was illustrated by two cinematograph films and a series of lantern slides, and was descriptive of the methods used by Parke, Davis & Co. in the manufacture of biological products. A discussion followed and questions were asked by the president (Mr. D. A. Rees), Mrs. Freke, Messrs. Brook, Carson, Cayzer, Wells and the secretary. These were answered by Mr. Boyes. A vote of thanks was proposed by the vice-president (Miss Borrowman), seconded by Mr. G. B. Brook.

Newport.—A meeting was held on April 16, at the Westgate Hotel, to receive from Mr. W. H. Padget his explanation regarding his candidature for the Pharmaceutical Society's Council election. Having received Mr. Padget's reason for his nomination, and after full discussion, the meeting passed the following resolution:—"That this Association meeting, after having heard from Mr. Padget his explanation regarding his adoption for the Pharmaceutical Council candidature, is of opinion that the best interests of the Association have not been served by the course adopted in securing nomination by the I.C.O., his nomination having been secured without the knowledge of a single member of his local Association; and in view of the pledge already given in support of the Cardiff Association's candidate, we feel we are unable to support Mr. Padget's candidature." There was a full attendance of members.

Thames Valley.—The annual general meeting of the Thames Valley District Pharmacists' Association was held at Kingston-on-Thames on April 17, the president, Mr. H. S. Durbin, in the chair. The secretary, Mr. E. L. Slade, presented the balance sheet of the dinner last February, and there was a small balance in hand. It was decided to hold a summer outing on June 5 next, and the arrangements were left in the hands of the secretary and Mr. C. B. Harrison. The officers were re-elected for the ensuing year. Mr. S. C. T. Littlewood, solicitor, Kingston-on-Thames, then addressed the meeting on the *Landlord and Tenant Act*. He gave a very lucid explanation of the Act and how it is working. Amongst the points mentioned were, that the Act did not give absolute security of tenure to the tenant, and he was of opinion that a chemist would have great difficulty in securing compensation for goodwill except in the case when the premises would be re-opened as a chemist shop. A good point in the Act was that costs incurred in appearing before the Tribunal were limited, also that all tenants of business premises came under the Act, including weekly and yearly tenants, not only those who held leases. It was very necessary to serve the notices exactly as directed in the Act; compensation for improvements was made on the value of the work at the expiration of the lease; the Act also applied to assignees of leases; only one renewal of a lease could be granted, and that for a term of fourteen years. The speaker replied to many points that were raised, after which a vote of thanks to the speaker brought the meeting to a close.

The Photauto Cabinet

A chemist whose business is situated in the North of England describes in the following article the installation of an automatic photographic machine, an apparatus which may become a feature in the pharmacy of the future.

THE excitement was great, for it was quite true we were to have an Automatic Photo Cabinet installed—in an ordinary pharmacy. We had somewhat of a photographic reputation, but this was such an unusual happening. The electricians were busy coupling up the power meter, the plumbers were busy laying on the water supply and providing the waste pipe. Through the ceiling of the cellar a hole 6 in. by 6 in. was made just where the machine was destined to stand on the shop floor. Through this hole had to go cable, waste and supply pipes. The day arrived, so did the machine. Volunteers were secured to negotiate the cabinet into the shop, and after tremendous exertions and not a little nervous apprehension it was safely landed. Now it was the turn of the installation mechanic, and eagerly he examined the number of the machine. "I know her," he said, "she comes from Blackpool; she's fitted with the latest type of conveyors." All that day and well into the night he talked to "her," loosening a screw here, tightening one there, dismantling this section to get a better inside view. At last he grudgingly left "her" for the night. "We'll have her running to-morrow," said he. "Good night." The next day saw him again busy at his job, and at 7 p.m. the first shilling was dropped into the slot.

THE "ROBOT" AT WORK

Immediately came on the headlights, five 400-watt lamps, making a brilliant moonlight effect all around. Ting went the bell, another and another, until eight rings had been made, two seconds between each ring. Clang went the knife as it cut off the 16-in. negative paper strip, which straightway started on its automatic journey. Down, straight down it came through a slide into the developing tank carried along by hard rubber-cored conveyors, down and up again, down and up again, the capacity of the developing tank being about double that of each of the others. As the strip came over the top into the washer it was subjected to a bath from the sprinklers. Its next experience was a journey through the bleaching solution, where the positive emerged, a wash, and then through sulphite clearing bath, a wash, and then through the toning bath, a final wash, and then it was carried along through the drying chamber, and in eight minutes there it was waiting to be taken from the little pocket at the back of the cabinet. Perfect? Well, hardly perfect, but very magical all the same. The first operation generally holds the keenest thrill, afterwards one's critical faculty asserts itself. Someone has truly said, "Automatic machines were made to go wrong." If the cabinet that is the subject of this article were the one in the mind of the author of that statement, I readily agree. It was Saturday, and we had persuaded a revue company to come along, and they filled the shop. The staff had a free view, a pantomime which they thoroughly enjoyed. Shilling after shilling went merrily down the slot, the bell made welcome music, and the shrieks soon demonstrated the appearance of the strips.

THE "PLANS O' MICE AND MEN"

All went well until someone remarked that it was a long time since the last one came out, then followed the usual, "You must have broken the camera." Sure enough, the machine, for some reason or other, felt it to be its duty to prevent those photographs ever seeing daylight, and so tried to scorch them inside the dryer. Investigations showed four or five strips crumpled up in concertina fashion. Now was the time for the mechanic to get his coat off. This he proceeded to do with the comforting assurance, "We'll have her right in a few minutes." The machine, however, wasn't to be hurried, and not until over three hours had been spent by the now perspiring admirer wrestling with its intricacies did "she" deign to smile upon his efforts. For the remainder of the day all went well, and most of the unfortunate ones were able to have retakes. The following Saturday (Saturday, of course, was the best day), as

I drew near to business after a comfortable meal, I was pleased to note signs of great activity around the shop windows. This augured well these dark depressing days, but I was quickly disillusioned. "She," had again proved unmanageable. On this occasion, the strip, instead of gliding smoothly down through the slot into the slide which took it to the developing tank, had turned aside and had jammed itself in the knife box. These few facts are sufficient to indicate the possibilities connected with automatics, but whether the semi-automatic or the automatic is the better proposition is a question difficult to answer.—BAUTO (28/3).

Running a Photographic Club

Mr. E. H. G. Bennett, chemist and druggist, Ipswich, describes how the inauguration of a photographic club has resulted in pleasure and profit.

OF the numerous types of customers one meets there is none so affable as the photographic enthusiast—he will discuss his successes and failures with singular animation—consequently it is easy to get him interested. Two years ago I put this question to every likely person: "Would you care to join in a photographic ramble to Pin Mill?" Many said: "We would like to, but—". Finally we got about fourteen in a comfy little charabanc, visited Freston Church, photographed the Lych Gate there, then went on to Pin Mill Beach, more pictures taken, through the fields to Woolverstone, tea, a peep at the Church, and home. A month later (October) we did Shrubland Park (the seat of a nobleman). Too late to do any more that year, but this set me thinking hard. "Where would you like to go next year?" was my query now to my clients. I wrote down their favourite places, studied the map of Suffolk, chose eleven places which I carefully selected, had 500 post-cards printed with the dates and places only, and circulated these amongst all the likely people. We have consequently held ten very successful outings. The great feature was the variety, e.g., Colchester (Roman, Saxon, and Norman remains), Constable's country (the lovely Stour Valley); Shrubland Park (fountains, statuary, trim gardens), Waldingfield (riverside, boats, yachts), Playford (old English Moated Hall), Hadleigh, Kersey and Lindsey (some of Queen Elizabeth's England). A week before each outing hand-written post-cards were sent to about twenty people who were keen. The event was advertised in the window and near the selling counter and talked about. The entire programme was handed to our job-master, who quoted for it, we making a stipulation that there was always to be the same chauffeur. This driver is as interested as any of us—he knows all the roads, and can always take us the best way and call attention to things which we (if on a new journey) would miss. He is also acquainted with the lonely bungalow on the deserted heath where we can get a cup of tea. There are no extras—unless we stop for tea somewhere. Usually we prefer to take our own provisions with us and picnic by the wayside. I lump all the fares together (children half-price), plus a tip to driver, postages and cost of complimentary photographs to clergy or curators who take us over the show places, and divide by number of members, so that each ramble pays for itself. I get the loan of all negatives taken, and last year's events resulted in about 150. A print of each goes into an album (fresh album every year), which is circulated amongst the members and their friends during the winter. We meet with great courtesy everywhere, a letter to the rector or vicar ensures us having him or his warden to meet us at the church and give us its history. The country gentry, too, are delighted for us to visit them and photograph their parks. We are a happy party always, we are all learning the history of our country and seeing places which are difficult of access and consequently fuller of romance for us—and incidentally it is creating a bigger business. I always send a report of the ramble to the local newspaper.

A NEW CONTAINER.—"Prussic acid, a small quantity of which wrapped in silver paper was found in one of his socks, was stated at the inquest . . ."—The Daily Sketch."

Photographic Notes

Including reviews of apparatus, news items, practical hints and other matters of interest to wholesale and retail photographic dealers

Manufacturers and Wholesalers

ATTENTION is called to the twenty-page two-colour inset in this issue, where will be found announcements by the following manufacturers, who are specially anxious to do business with chemists:—AGFA, LTD. (roll films and film packs); APEM, LTD. (roll films and self-toning paper); BELL & HOWELL CO., LTD. (ciné camera); ARTHUR BERTON, LTD. (camera cases); BROOK, PARKER & Co., LTD. (photographic sundries); CHEETHAM'S PHOTOGRAPHIC WORKS (developing and printing); DREM PRODUCTS, LTD. (exposure meter); DUDLEY & Co., LTD. (camera stands); R. W. GREEF & Co., LTD. (photographic chemicals); THOMAS ILLINGWORTH & Co., LTD. (roll films); JOHNSON & SONS, MANUFACTURING CHEMISTS, LTD. (photographic chemicals); SAMUEL JONES & Co., LTD. (passe partout); PHILIP JOSEPHS & SONS, LTD. (shop fittings); KODAK, LTD. (camera); KOSMOS PHOTOGRAPHICS, LTD. (printing paper); MAY, ROBERTS & Co., LTD. (cameras and films); H. R. NAPP, LTD. (hydroquinone); PEELING & VAN NECK, LTD. (camera); PHOTOPRESS (developing and printing); JOHN RILEY & Co., LTD. (hypo); ROBINSON & SONS, LTD. (cartons for chemicals); V. K. ROTARY Co., LTD. (Grip-fix); JOHN THOMPSON (WHOLESALE DRUGGISTS, 1921), LTD. (photographic sundries); UNITED PHOTOGRAPHERS, LTD. (developing and printing). We are having reprints made of this supplement, and shall be pleased to supply copies to any reader who cares to apply for them. The Supplement will be punched and corded so that it may be hung up in the pharmacy for ready reference.

Leitz Projection Apparatus

It will be recalled that some time ago the Leitz Leica camera was described and illustrated in the *C. & D.* The sensitive material used in the camera is the standard size of cinematograph film, so that if contact prints are made from such negatives they are on the small side. E. Leitz (London), 20 Mortimer Street, London, W.1, enable this difficulty to be overcome by means of a projection lantern and an enlarger. Both of these pieces of apparatus are compact, not unduly heavy and can be worked off the ordinary electric lighting system. In either case the picture projected is remarkable for its clearness and freedom from grain.

Delayed Action

An apparatus which will appeal to many "press-the-button" photographers is the Foth Delayed-Action camera marketed in this country by the Merx Optical Co., Ltd., 67-8 Hatton Garden, London, E.C.1. Among the interesting features of this instrument is that exposure can, when desired, be delayed for nine seconds after the spring which operates the shutter has been released, thus affording time for the operator to take up a position in the picture. When the delayed-action trigger is not depressed the camera is used in the ordinary way, as the shutter also allows time, bulb, and instantaneous exposures of $\frac{1}{100}$, $\frac{1}{50}$ and $\frac{1}{25}$ second. The lens is a $f/4.5$ anastigmat. The camera takes roll-film ($3\frac{1}{2}$ in. by $2\frac{1}{2}$ in.), it has an aluminium frame, and is covered with morocco leather.

Imperial D.S. Backing

THERE are many photographers who would not from choice expose an unbacked plate, while all experienced users of plates recognise the value of the backing, especially when halation is likely to cause trouble. The backing used on their plates by the Imperial Dry Plate Co., Ltd., Cricklewood, London, N.W.2, not only acts in this way, but is at the same time a desensitiser. The extra cost of the plates treated in this manner is small; in fact, when the advantages obtained are considered, the increase is infinitesimal. A brochure has recently been published by the company describing the virtues of the plates treated in this way and the procedure in developing. Dealers may obtain copies of the booklet free of charge on application to the above address.

Zeiss Ikon Cameras

Two new models of cameras are included in this season's productions of Zeiss Ikon products, the distributors of which are Garner & Peeling, Ltd., Polebrook House, Golden Square, London, W.1. The 1929 Box-Tengor ($3\frac{1}{2}$ in. by $2\frac{1}{2}$ in.) is a remarkably compact apparatus constructed entirely of metal and covered with leather. It has two built-in supplementary lenses, for groups and portraits respectively. Another point about this camera is that after the exposure trigger has been pressed down to release the shutter it automatically springs back to the original position. The Ikonette is a folding vest pocket camera, fitted with a $f/9$ Frontar lens. The metal body is leather covered. When the lens front is withdrawn it is automatically arrested at the infinity position and provision is made for focussing at two intermediate distances.

The Puck Roll-Film Camera

IN the photographic world, both amateur and professional, the name of the Thornton-Pickard Manufacturing Co., Ltd., Altrincham, has long been appreciated as identifying apparatus which embodies best British workmanship. The company has lately placed on the market the Puck box-form roll-film ($3\frac{1}{2}$ in. by $2\frac{1}{2}$ in.) camera, which, while maintaining the excellent standards that have hitherto characterised their products, is sold at a popular price. With its simple mechanism, rigid construction, excellent finish, and two good view-finders of the reflex type, the camera is excellent value. For loading, the interior is completely removed on withdrawing the film-winding key as far as it will go, and to ensure correctness when reinserting this part of the camera's "anatomy" the top side is so marked.

A Printing-out-Process Revival

WITHOUT in any way injuring the developing and printing business, there is no doubt that many photographic customers could be induced to undertake the making of additional prints from their negatives provided the methods of so doing do not involve too much trouble. Johnson & Sons, Manufacturing Chemists, Ltd., Hendon, London, N.W.4, have made a big stride in the right direction with their Daylight Paper, which they are now placing on the market. Each packet of paper contains 16 pieces $3\frac{1}{2}$ in. by $2\frac{1}{2}$ in., a selection of printing masks and sufficient chemicals for toning and fixing. The chemicals are divided into two packets for convenience when only a few sheets of the paper require toning and also to avoid waste of solution. This new development is to be advertised in the Press, by means of showcards and competitions.

Illingworth Products

SPEED and speed records have been, and are likely to be, matters of considerable interest for some months. So far as Thomas Illingworth & Co., Ltd., are concerned, speed is epitomised by "The Fast Film in the Bright Blue Box," and it is confidently anticipated that, fast as sales have been in previous years, all records will be broken this season. To assist in attaining this desirable result the company have prepared a striking poster (19 in. by 29 in.) and a number of showcards, the dominant note in each being symbolical of speed. Ample supplies of these display-aids will be sent free of charge to dealers who desire to make use of them. The film is also to be largely advertised in the lay Press. We have recently received a copy of the current issue of "T.I.C.," Messrs. Illingworth's house organ, which, in addition to giving various particulars regarding the company's activities, includes portraits of Mr. T. Midgley Illingworth, the managing director, Mr. H. J. Kraushaar, the business manager, and Mr. H. J. Robinson, who has been appointed representative on part of the South Coast.

Glasgow Dealers' Annual Meeting

THE annual general meeting of the Glasgow and West of Scotland Branch of the Photographic Dealers' Association was held at 200 Buchanan Street, Glasgow, on April 10. In the absence of the president and vice-president Mr. J. Weir was appointed chairman. After the adoption of the reports of the secretary and treasurer, the office-bearers were elected as follows:—*Hon. President*, R. Ballantine; *President*, A. Pollock; *Vice-President*, J. Weir; *Treasurer*, A. Fairbairn; *Secretary*, H. W. Thomas, 420-422 Argyle Street, Glasgow, C.2; *Council*, Messrs. S. Ballantine, R. A. Couper, W. Devine, P. M. Duff, A. Macsween, A. Murray, W. S. Culbert, R. H. Wilson, C. Horsburgh, O. Dewar, T. McKinnon, R. Cappell. *Auditors*, Messrs. O. S. Forbes, S. Cameron. An interesting discussion followed and the meeting closed with a vote of thanks to Mr. Weir for so ably presiding.

Ferrotypes Plates

The damage caused to ferrotype plates by overheating was the subject of a note in a recent issue of the Kodak "Professional Photographer." It is stated that some tests made in the company's laboratory indicate that the plates cannot safely be subjected to a temperature higher than 150° F. In addition to the checking and dulling of the surface the enamel will show marks of the print in relief. With the exception of the checking, these surface markings may be removed by immersing the plates in hot water for a few minutes. The check marks cannot be removed because the enamelled surface has actually cracked. When prints are dried at high temperature they often have a poor gloss, show drying marks and the tone of the print is affected—assuming a purplish hue in the shadows and halftones, particularly on the more contrasty grades of papers. Ferrotype plates should be washed before use to remove any traces of dust, and should be waxed occasionally to prevent prints from sticking. A good waxing solution is made by dissolving ten grains of paraffin wax in one ounce of benzine. Wet a tuft of cotton with this solution, go over the plate thoroughly and polish with a soft cloth until no trace of the wax can be seen. The plates should be stored on edge in grooves, or between blotters.

Chilean Photographic Market

DURING the war and post-war years American manufacturers obtained and held the market for photographic supplies in Chile, but had to give way in 1921 to German exporters. The low purchasing power of the great majority of the people has been the principal factor operating against the general use of cameras, and has at the same time favoured the sale of those fitted with rectilinear and the cheaper grades of anastigmat lenses. It would appear that German houses are taking every advantage to acquire an even greater percentage of the business, and this in part is borne out by the recent introduction of an additional quality line of German photographic supplies. At present there are several cameras of German manufacture on sale. British, Italian, and French exporters have so far taken little or no interest in the market. American films and accessories have withstood the strong German competition in a more successful manner than have cameras manufactured in the United States, although it has been observed during recent months that German and Belgian films have been advertised extensively through newspapers and in shop windows. With a slightly lower price than that asked for the American product, this will undoubtedly increase the popularity of European films.

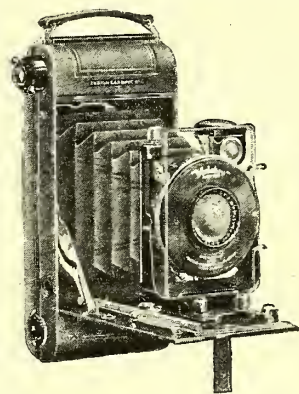
Photography in the Tropics

If the photographer intends to purchase his film along the journey he will find roll cartridges more universally on sale than film packs, according to Mr. H. J. Hine, when writing on this subject in the "British Journal of Photography" (March 1, 1929). In hot, moist countries each spool of film is supplied, as standard, in a sealed, soft metal container to protect it from the atmosphere. Even so, the traveller ought to try to find the history of the spools he is buying, lest he discover, too late, that they have spent part of their life grilling

in a shadeless bazaar. Another advantage of roll-film is that now and then a spool can be developed in a daylight tank. It would be unwise to try to develop all the exposures during the trip, but it is a great comfort to know whether or not exposures are being correctly adapted to unusual conditions of sun-altitude and atmosphere. In mosquito countries care must be taken in choosing a drying place for the films. Mosquitoes delight to feed on the nutritious gelatin, and their meals leave little bare patches on the film. These patches are serious when enlargements are to be made from the negatives. Where the mosquitoes are malarial, a dark-room ought not to be used. The moisture hanging in the room attracts the mosquitoes and provides them a suitable breeding place. Moreover, mosquitoes are night-feeding insects, and in a dark-room they think it is night all the time. I give this advice from unhappy experience. The photographic outfit must be protected from dust, and the camera must never be left open and uncovered in the sun, lest the heat melt the lens cement and the components slip out of place.

Ensign Apparatus

THERE can be few photographic dealers who to-day are not familiar with the All-distance cameras of Houghton-Butcher (Great Britain), 88-9 High Holborn, London, W.C.1. Popular as the first models of the camera proved, this progressive company was by no means content to rest on its oars, and there is now available both box and folding cameras finished in red, brown and blue as well as black. The folding models also incorporate a direct-vision view finder. Reference was made in the *C. & D.* recently (February 23, p. 238) to the Mulchro shutter; this is not sold separately, but as part of the camera, as shown in the accompanying illustration, which shows the shutter on the No. 6 Ensign Carbine. The shutter affords a choice of seven speeds ranging from 1 second to 1/100 second, in addition to time and bulb exposures. A perusal of the 1929 catalogue issued by Messrs. Houghton will well repay photographic dealers. For instance, among the accessories there are such things as the folding lens hood, direct-vision view finders, and other inexpensive lines, the use of which by amateurs would be of mutual advantage. The catalogue on the apparatus for trade developing and printing services is no less interesting, and may prove even more remunerative.



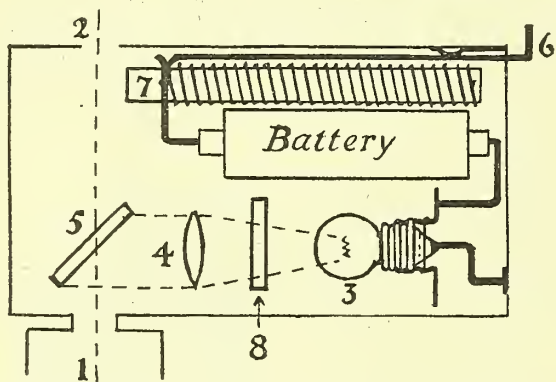
Kodak's New Goods

QUITE a number of new lines have lately been introduced by Kodak, Ltd., Kingsway, London, W.C.2, and among others the following are of particular interest to photographic dealers:—The improved Kodak film clip is made of metal which resists corrosion, and is designed to fit all types of modern hangers. There are drainage holes in both upper and lower plates, which prevent water collecting in the clip and eliminate the danger of dry films getting streaked when they are being removed. The tension is just right for a strong grip and the design permits the clip to be easily cleaned. The width at the jaw is 2 in.—The double vertical tank developing rod is recommended for use with the Double Film Clip when the practice is to develop with the clip across the rod. By the use of this double rod and the double clip about 50 per cent. of the loading and unloading time is saved. In addition, it is possible to take away any film complete with clip and order ticket without disturbing the others on the rod.—The No. 2 Brownie is now available in a choice of six pleasing colours—blue, claret, green, red, grey, brown—as well as black. The coloured model costs 1s. more than the ordinary No. 2 Brownie, and the smart colours in grained leatherette

should prove extremely popular this coming season. There is also a new model which makes crisp, clear, "close-up" portraits at only a few feet from the camera as well as ordinary snapshots of more distant subjects. For "close-ups," it is only necessary to depress a small lever, which brings a supplementary lens into position. The lever springs back automatically when the finger is removed.—The No. 1A Pocket Kodak Series II—one of the best known of the Kodak models—is now available in rich shades of blue, brown and grey, with a velvet-lined carrying case to match.

A New Exposure Meter

THE exposure meter shown in the accompanying diagram and which makes use of a constant light source, is manufactured by Les Etablissements Filmograph, 47 Rue de Bagneux, Montrouge, Seine, France. It consists of a box measuring 5 cm. by 9 cm. by 3.5 cm., and it weighs about 5 oz. In use, the observer looks through the eyepiece (1) at the object (2). The lamp used for comparison (3) is situated behind a lens (4), which renders the rays parallel. In this way the observer sees



at the same time the distant object and the nearby filament. The last-named is seen in the glass (5), on which it is reflected. The image of the filament is thus superimposed on the subject, the glass being transparent and reflecting only on its surface. The variable arm (6) alters the value of the rheostat (7), and this is adjusted so that the light from the filament is almost extinguished. A neutral wedge (8) is then adjusted until the image of the filament is not visible against the object. A graduated scale on the wedge is then read off, and reference to tables enables the correct exposure to be found.

Some New Lines of Peeling & Van Neck, Ltd.

THE name Voigtlander, when used in connection with cameras, is a guarantee of a well-made instrument at a reasonable price, and the latest addition to the series, the Bessa, well upholds this reputation. The camera is self-erecting, i.e., on pressing a button the baseboard comes down and the lens front comes into a position for a photograph to be taken at infinity; it is therefore an easy one to demonstrate and to use—important factors in the case of beginners. The lens is a $f/7.7$ anastigmat, so that there is plenty of depth of focus, yet the aperture is not such as to preclude snapshots on a dull day. The apparatus takes $3\frac{1}{4}$ in. by $2\frac{1}{4}$ in. roll-film, the insertion of which is an easy matter, owing to the hinged back. Messrs. Peeling and van Neck (4-6 Holborn Circus, London, E.C.1) are also the agents for Satrap roll-films and film-packs, made by Schering-Kahlbaum A.G., the well-known chemical manufacturers. Among the interesting points about the film-pack are that it is in a cardboard and not a metal case (a method of packing which is quite satisfactory if properly handled), and it sells at the prices in force before the recent increase. Another interesting piece of apparatus which the company handle is the new model of the Heyde's photo telemeter or distance gauge. This little instrument (it measures $3\frac{1}{2}$ in. by 1 in. by $\frac{3}{4}$ in.) is particularly easy to use, i.e., get the two parts of the picture in alignment. The company can also supply

albums of the highest quality. These are dark brown in colour, contain twenty-four leaves, and are bound with a silk cord with tassels, so that each leaf can be removed for pasting on the prints. Among the beautiful specimens which deserve special mention is the Florence, of real leather, richly tooled with a picture of Dante and Beatrice, and the Venetian, which is available in various designs with gilt finish.

Thiocarbamide for the Lantern Slide

Referring to the excellent quality and colour obtainable on lantern slides by means of the thiocarbamide process, a writer in a recent issue of the "Amateur Photographer" recommended the following method:—Take a finished slide which has been developed for a cold tone. The slide should be slightly under-developed, as the process has a mild intensifying effect. Place the slide in the following bath until it is completely bleached (which generally takes about a minute), and then wash it well:—

Ammonium bromide	...	...	50 gr.
Potassium ferricyanide	...	...	150 gr.
Water	...	...	10 oz.

Then redevelop in strong daylight, or intense artificial light, in the following:—

A. Metol	...	...	44 gr.
Hydroquinone	...	...	22 gr.
Sodium sulphite	...	...	1 oz.
Sodium carbonate	...	...	1 oz.
Water to	...	...	20 oz.
B. Ammonium carbonate	...	...	1 oz.
Ammonium bromide	...	...	1 oz.
Water	...	...	10 oz.
C. Thiocarbamide	...	...	33 gr.
Ammonium bromide	...	...	11 gr.
Water	...	...	10 oz.

For use, take 12 parts of A, 3 parts of B, and 1 part of C. These proportions are for the much-sought-after blue-grey tone. For warm brown tones, take A, 14 parts; B, 1 part; C, 1 part. For warm black tones, use A, 10 parts; B, 5 parts; C, 1 part. The beginner is advised to keep to the proportions for blue-grey tones at first. The developer should be used at a temperature of 65° to 70° . Quick development should be aimed at, as longer development not only increases density, but reduces transparency. It is found that different slides behave differently in the developer.

THE PHOTOGRAPHIC FAIR, which was to have been held at the Royal Horticultural Hall, London, next month, has been abandoned.

J. H. DALLMEYER & Co., LTD., 31 Mortimer Street, London, W.1, have lately issued an interesting brochure on the telephoto lens, and another on cinematograph lenses. These booklets as well as others on the still- and motion-picture cameras which the company supply can be obtained post free on application.

AMALGAMATED PHOTOGRAPHIC MANUFACTURERS, LTD., 3 Soho Square, London, W.1, are placing on the market two new box-form cameras, the Soho Junior and the Farnear. Both are of simple design, but the latter has a direct-vision view finder and a built-in lens for close-up work. In each case roll film of the $3\frac{1}{4}$ in. by $2\frac{1}{4}$ in. size is used.

E. T. PEARSON & Co., LTD., 35 Gordon Square, London, W.C.1, are manufacturers of metol which is guaranteed free from dimethylparaphenylenediamine, the reputed cause of dermatitis. The company also make the Ortofon vertical enlarger and the Autofix paper holder, both of which are of interest to dealers who do enlargements for amateurs.

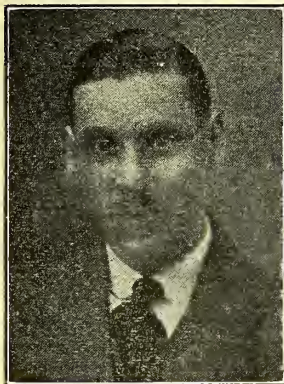
APEM, LTD., St. Albans Road, Watford, who are the manufacturers of Rajar, Paget and Marion sensitised photographic materials, are issuing some excellent show-cards depicting the results obtainable with Paget self-toning paper and the Rajar roll film. Copies of these and of the company's price list will be sent to dealers who apply for them.

Council Candidates

OUR issues of April 13 and April 20 contained (pp. 442 and 470) the personally contributed views of seven of the sixteen candidates who are standing at the forthcoming Council election of the Pharmaceutical Society. We subjoin a further instalment of these pronouncements

Mr. James Fallows McNeal

has come to the fore as a doughty champion of the claims of retail chemists and druggists, and, he asks us to add, "the leader of a progressive movement in pharmacy."



Mr. J. F. McNEAL

Of Scottish nationality, Mr. McNeal was educated at Longton Grammar School and Queensbury. He was the first apprentice of Councillor W. H. Kemp, J.P., Stoke-on-Trent, twenty-three years ago; after completing his apprenticeship he held positions in Margate, Bournemouth, Bromley, South-West London, and in the West End with Jolley & Co., Curzon Street, Mayfair. He studied analytical chemistry under Dr. Harris. The European war came, and Mr. McNeal served nearly

four years with the Forces. On demobilisation in 1919 he was on the staff of the Northern Command Headquarters at York. In 1920 he entered the London College of Pharmacy, qualifying in 1921. After a further period with Messrs. Jolley & Co., Mr. McNeal commenced in business at Northwood, and since 1923 has been in business at Northwood and Eastbourne. Having been twice approached by his party to contest a constituency at the general election, he is at present devoting his spare time to political work. He was an active member of the Harrow and District Branch of the Pharmaceutical Society, served on its committee, and was chairman in 1926. He has been secretary and delegate of the Harrow Branch of the Ex-Service Pharmacists' League and local secretary of the P.A.T.A. Mr. McNeal is an ex-member of the Ruislip-Northwood Urban District Council, and served on its public health and housing committees, resigning to live in Eastbourne. He is an ex-member of the committee of the Northwood and Pinner Chamber of Trade, and was a founder and local secretary of the Greater London Fund for the Blind. Among his many other activities Mr. McNeal was a founder and treasurer of the Northwood Branch of the British Legion, and also served on the committee of the Northwood Conservative Association. He sends us the following statement:—

I would support and work for:—

- (1) Better co-operation with the medical profession with a view to a settlement of the dispensing problem, which at present reacts unfavourably to both parties.
- (2) Better co-operation with Government departments to secure more equitable treatment under future legislation and to avoid undue alarm and agitation.
- (3) The control of the Benevolent Fund on a business-like basis, similar to that which existed before the war, when every subscriber had a vote in its affairs.
- (4) A greater concentration on the problems of the chemist keeping open shop.
- (5) As to shop hours regulations: many restrictions placed upon chemists are onerous and could be altered without in any way detracting from the principle of the Act.
- (6) An examination certificate of sufficient art and merit that the dignity of a legal body would be upheld by its exhibition.

(7) In any revision of the poison laws, I would press for the inclusion of a clause which would prevent the sale of poisons by wholesale firms to retail firms.

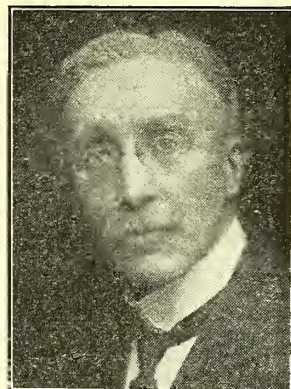
(8) Full recognition of the services of chemists and druggists in hospitals, institutions and H.M. Forces, to provide further outlet and scope for our young qualified members.

(9) I would protest against the trading in welfare centres to people who can afford to purchase through the usual channels.

(10) A more businesslike control of "The Pharmaceutical Journal." In spite of having "the largest circulation in the trade," and consequent attraction for advertisers, the Journal costs the Society nearly £8,000 per annum.

Mr. A. R. Melhuish, Ph.C.,

served his apprenticeship with Williams & Peters, London, N.W., and followed this training with work in the laboratories of Idris & Co., at that time under the direction of Dr. W. H. Symons. He passed the Major examination in 1891 and was subsequently with Squire & Sons, Oxford Street, W., for two years. In 1898 Mr. Melhuish acquired the business of E. Burden & Co., 78 Duke Street, Grosvenor Square, W., which he still carries on. During the war he acquired the goodwill and prescription-books of a neighbouring pharmacy, founded in the reign of George III, and at one time owned by Mr. William Bastick, the



Mr. A. R. MELHUISSH, Ph.C.

originator of the formula for ammoniated tincture of quinine. Mr. Melhuish has been president (in 1914-16) of the Western (London) Pharmacists' Association, a member of the Pharmaceutical Society's board of examiners for England and Wales, and an energetic member of the London Insurance Committee. He served a term of office as chairman of the Retail Pharmacists' Union Executive, and gave evidence before the Royal Commission on National Health Insurance and also before the Departmental Committee on Morphine and Heroin Addiction. Mr. Melhuish succeeded the late Mr. E. White as chairman of the Establishment Committee, and has for many years, as a member of the Science Committee, taken part in the work of revising the British Pharmaceutical Codex. In reply to our request for a considered statement, he writes:—

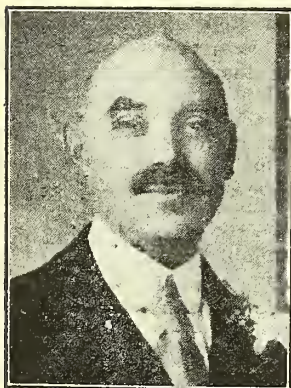
As a member of the Council during the last ten years I have worked steadily for the advancement and proper recognition of pharmacy in all its aspects, and have served upon every standing committee of the Council.

It seems to me that we are approaching a very difficult time, if not one of crisis, in pharmacy, and that all our energies, thought and experience will be necessary to meet the situation that will probably arise upon the publication of the report (now promised) of the Inter-Departmental Committee on the Poisons and Pharmacy Acts. The legislation (a new Poisons and Pharmacy Act) that I believe must certainly follow will profoundly affect, for good or ill, not only the future of our calling, but every individual pharmacist. With what leaders, and how best to meet this situation, I venture to think, should be the main issue before the pharmaceutical electors.

At this critical period in the Society's history it is important to distinguish clearly between this great issue and the minor issues that may be put forward. I believe that the knowledge and experience which my colleagues and I have gained in the past on the Council will in the near future be of real service to the Society and to its members, and it is for this reason that I ask for a renewal of their confidence and support.

Mr. Alban Atkin

was born in Lincoln, and received his education in the city at the Middle and Grammar Schools. He was a



MR. ALBAN ATKIN

pupil of Alderman William Cottingham, a former Mayor of Lincoln, and distinguished himself in rowing, being coxswain of a crew of the Lincoln Rowing Club which won the Malcolm challenge cup at Boston. On completion of his indentures Mr. Atkin came to London, where after nine years' further experience he purchased, twenty-five years ago, the branch business of Mr. Ankland in West End Lane, West Hampstead, N.W. He served in the R.A.M.C. Volunteers (T.F.), reaching the rank of staff sergeant. During the war Mr. Atkin was given an important

appointment, which he resigned owing to ill health, afterwards joining the Metropolitan Special Constabulary, in which he still serves with the rank of sergeant. He was the first quartermaster of the Pharmacists' Training Corps. For some years Mr. Atkin was a member of the executive committee of the Hampstead Chamber of Commerce, and on two occasions has been chairman of that organisation. He is a representative of that body on the London and Suburban Traders' Federation. He was elected to Hampstead Borough Council ten years ago, has served on all the important committees, and is now chairman of one. At the last election he was described in the local Press as "most persistent and most tenacious in asking questions." For a period he represented Hampstead Borough Council on the King's Roll Committee and also on the Unemployment Committee (Ministry of Labour), and is now one of its representatives on the District Council for the Administrative County of London and the Joint Industrial Council for Local Authorities' Non-Trading Services (Manual Workers). Mr. Atkin is a ward secretary of the Hampstead Conservative Association, a member of the executive of the National Citizens' Union, a trustee of King Edward VII Memorial Institute, and a school manager under the London County Council. In the Edward Terry Lodge of Freemasons he has held every office except that of Worshipful Master. He has been a member of the Western (London) Pharmacists' Association for over twenty years, and has served on its committee.

Mr. Atkin writes that his views on commissions for pharmacists in the Army, the defence of the title "chemist," professional status, National Insurance dispensing, D.D.A. Regulations, and chemists' rights are well known to readers of the pharmaceutical Press.

Retail Pharmacists' Union

Warwickshire.—The Warwickshire Branch of the Retail Pharmacists' Union met at Leamington Spa on April 18. Communications were read on (a) proposed meeting to discuss Sickness and Provident Society, (b) continued support of Branch regarding a much advertised proprietary tablet, (c) D.D.A. and doctors' obligations thereon and (d) the co-operative society menace. It was decided to approach Parliamentary candidates in the area by means of small deputations on various pharmaceutical matters. A suggestion to circularise the Press on their attitude towards the Shops Act was ordered to be referred to the R.P.U. for opinion and advice. The Branch supported the Union in its efforts to prevent any change in the Act. The importance of insuring fittings, etc., of windows, as well as the plate-glass, was referred to by a member, and corroborated by others present. The concession of special discounts to certain associations by chemists at the request of those associations was also discussed and condemned.

Westminster Wisdom

Notes on Parliamentary Matters

RECIPROCITY WITH NORTHERN IRELAND

In the House of Lords, on April 23, Viscount Gage, on behalf of Lord Desborough, introduced a Bill entitled "An Act to enable the Council of the Pharmaceutical Society of Great Britain to make by-laws providing for the registration, without examination, of persons registered as pharmaceutical chemists in Northern Ireland." The Bill consists of the following single clause:—

The power of the Council of the Pharmaceutical Society of Great Britain to make by-laws under section two of the Pharmacy Act, 1852, as extended by section four of the Poisons and Pharmacy Act, 1908, shall be deemed to include power to make by-laws providing for the registration, upon payment of the prescribed fee, as pharmaceutical chemists or chemists and druggists under the Pharmacy Acts, 1852 and 1868, without examination, of persons registered as pharmaceutical chemists in Northern Ireland who produce evidence satisfactory to the Council that they are persons of sufficient skill and knowledge to be so registered.

This Act may be cited as the Pharmacy Act, 1929.

The Bill was read a first time.

DUTIES ON FINE CHEMICALS

Replying to questions asked by Mr. Crawford on April 23, the President of the Board of Trade (Sir P. Cunliffe-Lister) stated that under the Safeguarding of Industries Act, 1921, and the Finance Act, 1926, an import duty is leviable on synthetic organic chemicals, analytical re-agents, all other fine chemicals, and chemicals manufactured by fermentation processes; and the information available relates to the whole of this group of chemicals. The imports of these chemicals subject to duty, retained for home consumption in the years 1926, 1927 and 1928, were valued at £493,740, £552,942 and £567,852 respectively, and the amount of duty paid was £164,630, £184,002 and £188,871. Particulars of quantities are not available, and imports of goods consigned from and manufactured in the British Empire, which are not subject to the duty, are not included.

REPARATION DYESTUFFS

The Financial Secretary to the Treasury (Mr. Arthur Michael Samuel) informed Mr. Pethick-Lawrence on April 23 that the total quantity of reparation dyestuffs invoiced to his Majesty's Government was 9,523 tons. These have all been disposed of for the total amount of £2,187,167 11s. 2d. The amount debited to his Majesty's Government by the Reparation Commission was 31,297,000 gold marks. No reparation dyestuffs have been imported since 1925.

TURPENTINE DUTY

The Financial Secretary to the Treasury (Mr. A. M. Samuel), replying to Lieut.-Commander Kenworthy on April 17, said he could not hold out any hope of the Chancellor of the Exchequer seeing his way to withdraw the duty on turpentine as imposed in the Finance Act, 1928.

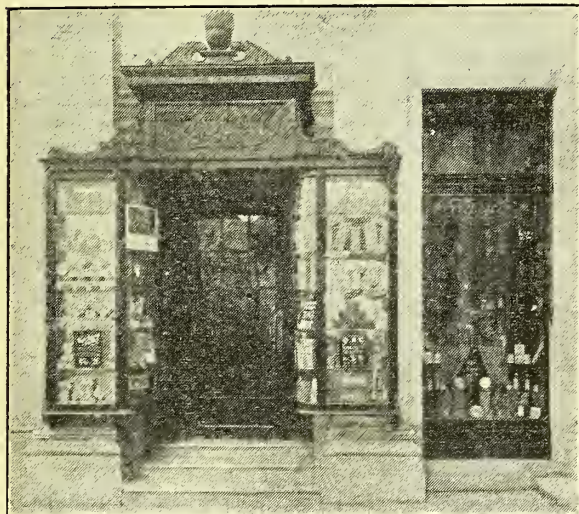
CREAM PRESERVATIVES

The Minister of Health (Mr. Chamberlain), in his reply to a question put by Captain Streatfeild on April 18, stated that there is evidence that individuals have suffered from digestive disorders after taking boracised cream, and there are cases on record where a single dose of borax has caused death. But, apart from the general objection to the use of preservatives in food as tending to mask the effects of dirty methods of production, the case against borax is that it is a cumulative and insidious chemical substance, the continued ingestion of which cannot fail to be injurious, in a greater or less degree, to the tissues of the body.

SUDAN GUM ACACIA.—The exports from the Sudan during 1928 constituted a "record," being 22,777 tons valued at £E.724,468; the previous "record" was 22,744 tons in 1926.

The First Shop in Park Lane

In the history of London there is hitherto no record, so far as we know, of any shop in Park Lane. A shop has now been opened by Heppells, Ltd., who, with their



usual enterprise, are anticipating the requirements of this high-class thoroughfare and of the occupants of the new Grosvenor Buildings in particular. Heppells' new pharmacy is fitted up in a sumptuous manner which is entirely in keeping with the character of the neighbourhood.

Trade Notes

BONUS DISPLAY SCHEME.—James Neill & Co. (Sheffield), Ltd., Sheffield, manufacturers of Eclipse safety razor blades, are offering a bonus in return for a window display.

SEAJOY PLASTERS, a remedy against all forms of travel sickness, are obtainable from The Seajoy Co., Putney, London, S.W.15, and Butler & Crispe, 80-82, Clerkenwell Road, London, E.C.1.

B. A. SMITH & Co., 107 Upper Thames Street, London, E.C.4, have been appointed agents for the United Kingdom for the Société Anonyme Anct. B. Siegfried, Zofingue, Switzerland, manufacturers of pharmaceutical chemicals.

SULPHUR TABLETS.—Wigglesworth, Ltd., Westoughton, Lancs., supply their sulphur tablets in cellophane bags, an easy way of handling this popular spring medicine. The bags of tablets are packed in boxes suitable for counter display.

A GIFT IN SEASON.—Mr. W. H. Thomas, Mouson House, 50-52 Union Street, London, S.E.1, calls attention to the special offer he is making in connection with the Lilac series of toilet preparations. With every parcel free sprays of imitation lilac flowers and perfume are supplied.

LUTON HAT DYES.—Whitaker & Co., Kendal, offer to send to any chemist who applies for one a striking cut-out of a lady dyeing a straw hat with one of their well-known dyes. It is suggested that it should be slipped into a carton or put in some other suitable place to call attention to the dyes.

ALTERATION OF HOURS OF BUSINESS.—Thomas Morson & Son, Ltd., manufacturing chemists, 47 Gray's Inn Road, London, W.C.1, inform us that during summer time their London offices will be closed at 5.30 p.m.—Wilcox, Jozeau & Co. (Foreign Chemists), Ltd., 15 Great St. Andrew Street, London, W.C.2, ask us to call the attention of subscribers to the fact that from April 29 their hours of business will be as follows: Monday to Friday, 8.30 a.m. to 12.30 p.m. and 1.30 p.m. to 5.30 p.m.; Saturday, 8.30 a.m. to 12.30 p.m.

A HALF-DAY EXCURSION to Port Sunlight has been arranged for May 8. The train leaves London (Paddington Station) at 11 a.m., and Liverpool, on the return journey, at 10.40 p.m. The price of the return fare is 10s. This is one of a series of educational excursions, and includes a conducted tour over the works of Lever Brothers, Ltd.

"CO-OPERATION" is the title of a brochure which is being published by Trufood, Ltd., Lever House, Blackfriars, London, E.C.4. A number of interesting technical and business matters are dealt with in the booklet, and in the introductory note the company reiterates their opinion "that the sale of all baby foods should be made through the chemist only."

SUN SPECTACLES.—The General Optical Co., 120 Clerkenwell Road, London, E.C.1, are advertising anti-glare spectacles in this issue. These glasses are in frequent request during the summer season and the demand is one which chemists as well as chemist-opticians should endeavour to meet. The spectacles offered by the General Optical Co. are supplied in imitation shell in a variety of styles and can be retailed at a reasonable and remunerative price. A descriptive leaflet will be sent to subscribers who apply for it on a trade card.

IDEENIT.—The Peronia Co., Ltd., Stoney Street, Nottingham, will send a free sample of their new product to any chemist who has not already received one. A package of Ideenit comprises iodine solution in a glass tube (the neck of which is arranged to form a sprinkler and is sealed with a metal screw cap) and finger bandages of unusual design. These are made to slip over the finger, pull tight and seal, an extremely simple operation occupying a fraction of a second. The bandages are also sold apart from the Ideenit itself.

AMONG the premises at which Philip Josephs & Sons, Ltd., 90 and 92 St. John Street, Clerkenwell, London, E.C.1, have lately carried out alterations to the shop fronts and fittings are those of the following pharmacies:—The Surrey Drug Co., Ltd., Cheam, Surrey; Mr. J. J. Pickering, Slough; Mr. W. Deacon, Minehead; Mr. T. D. Rees, Aberavon; Mr. W. Fox-Clarke, Bournemouth; J. C. Richardson & Co., Didcot; P. R. J. Roberts, Jersey; Mr. Perredes, Lowestoft; Holman Ham Co., Ltd., Yeovil and Exmouth; Hillman Attwell, Ewhurst.

X-BAZIN DEPILETORY.—Tibo Products Co., Ltd., Audrey House, Ely Place, London, E.C.1, as will be seen on another page in this issue, are placing on the market in this country a cream depilatory which is already well established abroad. A window display bonus is available and some striking showcards have been prepared. The company ask us to convey their apologies to those chemists the execution of whose orders has been delayed, and to say that it is confidently anticipated that they will be able to cope with the unprecedented demand in the course of a few days.

PHILIRAY REFLECTORS.—Philips Lamps, Ltd., 145 Charing Cross Road, London, W.C.2, have issued an interesting booklet on shop window lighting, a copy of which will be sent to any chemist interested. The Philiray reflectors, the use of which is explained in the brochure, are available in three patterns, designed respectively for high wide windows, high narrow windows, and for concentrating light on a particular portion of the display. The reflectors are made in such a way as to ensure freedom from peeling or tarnishing. The makers give a five years' guarantee with each reflector.

Business Changes

MR. ERNEST NASH, Ph.C., Barnsley, has removed his business from Queen Street to 1 Peel Street.

SPILMAN (CHEMISTS), LTD., 179, Holderness Road, Hull, have purchased the business of Mr. A. A. Field, chemist and druggist, 91 Promenade, Bridlington.

THE MOND STAFFORDSHIRE REFINING CO., LTD., are removing on April 29 to Abbey House, Westminster, London, S.W.1. Tel: Victoria 7748 and 2154.

Births

Notices for insertion in this column must be properly authenticated.

HUGHES.—At 285 Boston Road, Brentford, on April 18, the wife of Sidney R. Hughes, chemist and druggist, of a daughter.

Marriages

BENSON-TANNER.—At Bath Road Wesleyan Church, Swindon, recently, Alan Frederic Benson, chemist and druggist, to Hilda A. Tanner.

FITZPATRICK—LYNE.—At the University Church, Dublin, recently, Thomas Fitzpatrick, Ph.C., Waterford, to May Lyne.

GIFFORD—KEWLEY.—At St. Silas's Church, Blackburn, on April 22, Thomas Chenoweth Gifford, chemist and druggist, son of the late Mr. R. Lord Gifford, Ph.C., to Doris Kewley.

MACNAB—SCOTT.—At Burlington House, Glasgow, on April 10, Allan Macnab to Elizabeth Alexander, younger daughter of Mr. Alexander Scott, J.P., chemist and druggist, Callander.

Deaths

BOURDAS.—At Dunoon House, Clapham Common, London, S.W., on April 20, Mr. Isaiah Bourdas, Ph.C., aged eighty-nine. Mr. Bourdas served his apprenticeship to his father, and passed the Major examination in 1860. His was probably the oldest name remaining on the Register of Pharmaceutical Chemists, and the only one which had simply "London" as address. He was for a long period the proprietor of the business known as Bradley & Bourdas, 6 Pont Street, and 48 Belgrave Road, London, S.W.1. Mr. Bourdas frequently acted as a scrutineer at the Council elections of the Pharmaceutical Society, and attended many of the meetings of the British Pharmaceutical Conference. He is survived by five sons and three daughters. The funeral took place on April 24. The first part of the service was held at the Church of the Ascension, Balham Hill, where Mr. Bourdas had been a worshipper for forty years. The chief mourners were Mr. I. Bourdas, Dr. E. C. Bourdas, Surgeon-Commander J. Bourdas, Mr. E. Bourdas and Mr. A. F. Bourdas (sons), Mrs. Tinley Tinley, Mrs. Renny Pinkney and Mrs. Robert Quick (daughters). The large number of floral tributes testified to the esteem in which Mr. Bourdas was held. The interment took place at Brompton Cemetery in the family grave.

DREVER.—At Ryhope, recently, Mr. John Don Drever, chemist and druggist, aged forty-seven.

HICK.—At Camden Villa, West Chevin Road, Otley, on April 23, of pneumonia, Mr. Victor Dinsdale Hick, M.P.S., aged twenty-six.

MOIR.—At Johannesburg, on March 31, Dr. James Moir, of the Transvaal Mines Department. Dr. Moir was one of South Africa's foremost chemists and scientists. He was president of the Chemical, Metallurgical and Mining Society of South Africa from 1910 to 1911, and he was president of the South African Chemical Institute from 1915 to 1916, and from 1924 to 1925. He had also been councillor of the South African Association for the Advancement of Science since 1906, and was president of the Chemical Section of that body in 1919. He contributed to numerous scientific periodicals.

NOBLE.—At his residence at Leyton, on April 22, of bronchial pneumonia, Mr. F. H. Noble, aged sixty. Mr. Noble was connected with Marshall, French & Lucas, Ltd., produce brokers, 4 and 5 Fen Court, Fenchurch Street, London, E.C., for the last ten years as market clerk in the seeds department. The funeral takes place at Wood Green Cemetery on Saturday, April 27, at 11 o'clock.

SMITH.—On April 16, Mr. John Henry Smith, Ph.C., for forty-one years in business in Bridge Street, Newark, aged sixty-nine.

STEWART.—On April 18, Mr. James Stewart, F.C.A., F.C.I.S., 27 Queen's Road, Leytonstone, E.11, director and secretary of Schering, Ltd., 3 Lloyd's Avenue, London, E.C.3, aged sixty-three.

WARDLEY.—At Monte Vista, Bedford, South Africa, on March 25, Ethel Mary (*née* Hakeman, youngest daughter of the late Mr. Bailey Hakeman, Terrington, St. Clement, Norfolk, England), beloved wife of Mr. Thomas Wardley, chemist and druggist, Bedford, South Africa.

WHITE.—At his residence, 7 Acre Place, Stoke, Plymouth, on April 18, Mr. John Morcomb White, chemist and druggist, aged ninety-one. Mr. White was born in London, but his parents removed to Devonport when he was a year old. He served his apprenticeship to the late Mr. Dickinson, chemist, Fore Street, Devonport, and gained further experience in London. In 1861 he commenced on his own account at 6 Marlborough Street, Devonport, where he carried on business for sixty-eight years. Mr. White was active till quite recently, and only took to his bed the day before his death. He is survived by a widow, four sons and a daughter.

Personalities

MR. C. V. BRUMWELL, chemist and druggist, Portslade, has been elected to fill a casual vacancy on the East Sussex County Council.

MR. E. F. W. THORP, chemist and druggist, Hoylake, Birkenhead, has been elected a member of the executive committee of the local chamber of trade.

A CERTIFICATE of naturalisation has been granted to A. Awrounin (known as Harold Awrounin), physician, 106 Holmleigh Road, Stamford Hill, London, N.

ALDERMAN J. V. MAINPRIZE, chemist and druggist, has been elected Chief Lord of the Manor of Bridlington, an ancient body which has governed the township for over four centuries.

MR. J. E. STONEMAN, chemist and druggist, has been appointed superintending pharmacist, and Mr. H. C. S. Booth, chemist and druggist, senior pharmacist at the Royal Naval Hospital, Plymouth.

MR. L. A. CAMKIN has resigned his position as London representative for Kolynos, Inc., and is sailing for Australia on May 3. Mr. Camkin asks us to express his thanks to his many friends for their courtesies in the past.

MR. R. S. DONINGTON, J.P., Ph.C. (Donington & Co., Spalding), has been elected chairman of Spalding Urban District Council, of which he has been a member since 1922. Mr. Donington is the son of the late Mr. Robert Donington, chemist, Spalding, and passed the Major examination in 1894.

MR. E. G. T. LOYLEY (director of Francis Newbery & Sons, Ltd., druggists' sundriesmen, London, E.C.1, and manager of the company's Cardiff branch) and Mrs. LOYLEY recently celebrated their silver wedding. To celebrate the occasion a presentation was made to Mr. Loyley on April 17. Mr. Arthur Newbery, chairman, after mentioning the very high regard in which Mr. Loyley was held by all members of the staff, handed him the silver Georgian tea service which had been subscribed for by the shareholders, directors, and staff, expressing the hope that Mr. and Mrs. Loyley might be spared to enjoy many more years of happiness.

Information Department

INFORMATION WANTED

Postal or telephone information with respect to makers or first-hand suppliers of the undermentioned articles will be appreciated.

M/184. Antidotal tooth brushes	B/244. Neoxine tooth-powder
B/244. Dr. Matthews' Camphol	N/244. Pessl beauty preparations
R/134. Lotus powder leaves	G/164. Philoline (glycerin substitute)
S/234. Mandrake pills	B/174. Sectifuge
S/244. Melovine throat pastilles	S/244. Winter fluid

Observations and Reflections

By Xrayser III

Examiners' Views

respecting the shortcomings of candidates are of particular importance when changes in the examination system are pending, and it is to be hoped that teachers in schools and colleges where pharmaceutical students are trained will give careful attention to the extracts you publish from the annual report of the Pharmaceutical Society's London examiners (*C. & D.*, April 20, p. 469). There would appear to be marked deficiencies in the candidates' knowledge of the purely scientific subjects, and this makes one wonder whether the general education of our students, as tested in the Preliminary examination, is all that it ought to be. Apart from this, my personal impression is that many of the candidates are prepared for examination instead of being properly educated. They memorise facts instead of mastering principles, their practical work is not sufficiently systematic, and the result is that the element of chance enters much more largely into the examination tests than is desirable. The moral would appear to be that steps must be taken by teachers and students to learn how to impart and acquire respectively a fundamentally sound knowledge of the purely scientific subjects—botany, chemistry and physics.

Pharmacy

is the subject of the Qualifying examination which provides ground for the most serious criticism, though the examiners' comments on weakness in the other subjects are sufficiently caustic to merit serious consideration. I should imagine, however, that better training in the subjects of the Preliminary Scientific examination would be reflected in an improved state of preparedness for examination in pharmacognosy and pharmaceutical chemistry. But there must be some other remedy for the poor results in pharmacy, including the forensic branch of that subject. Shop training and school training appear to be alike unsatisfactory in the provision made for teaching pharmacy, and amendment of existing conditions in this respect seems to be called for urgently. It is understood, of course, that the examiners whose annual report is now commented upon are those for England and Wales only. Shop training is probably better generally in Scotland, and Scottish students are apt to take their college courses more seriously.

Two Candidates

at the approaching Council election support the idea of compulsory membership of the Pharmaceutical Society (*C. & D.*, April 20, pp. 470, 471), and one of them expresses the opinion that this would be a means of strengthening the Society. That, however, is more than doubtful, as pressed men are not, as a rule, to be relied upon as supporters of those who compel them to do other than they desire. Perhaps the best comment upon the suggestion of compulsory membership is that furnished by the president of the Society at the latest annual dinner of the North London Pharmaceutical Association (*C. & D.*, April 20, p. 472), when he pointed out how the membership had grown since 1907—this without anything in the nature of compulsion and in spite of an increase of 50 per cent. in the annual subscription. I cannot think that the political influence of the Society would be any greater if it consisted of 20,000 compulsory members rather than 14,000 voluntary ones. As a matter of fact, I should expect it to be less. It would be well, by the way, if supporters of this extraordinary project would condescend to impart to us their views on the financial question that must arise if ever the idea of compulsory membership of the Pharmaceutical Society comes up for serious consideration. Is the present life membership fee of twenty guineas to be extracted from every successful candidate after passing the Qualifying examination and before letting him have his certificate? If not twenty guineas, how much? and what is the individual to receive in return beyond the

right to put "M.P.S." after his name? Another important thing we ought to know is how the advocates of compulsion expect to secure the necessary parliamentary powers, as it would be something quite out of the common for a British Parliament to decide that everyone qualifying as a chemist and druggist must join a particular organisation

During the Next Two Months

the eyes of British pharmacists will be turned towards the city of Dublin, where lavish entertainment is being prepared for the members of the Conference on their visit in June. I am venturing to bring into the light for a few minutes the name of one man who has a pretty secure place in the history of chemistry as known to those who have studied the period when phlogistians and antiphlogistians contended for the field. William Higgins was a native of county Sligo; the time of his birth does not seem to be known. He was a nephew of Dr. Bryan Higgins, who was born in the same county about the year 1737. The uncle was a physician who migrated to London, where he was a successful practitioner. William came as a boy to his uncle in London, and for a year or two acted as his assistant. He would have good opportunities of becoming an accomplished chemist, because Dr. Bryan Higgins conducted a school of practical chemistry in Greek Street, Soho. From this establishment William was sent to Pembroke College, Oxford, where he graduated. On leaving Oxford he returned to his uncle's laboratory for some time, but some disagreement ensuing because of their divergent views on the theory of phlogiston, the young man, who was a convert to the new French antiphlogistic chemistry, left his guardian in order to pursue an independent career.

William Higgins,

in 1791, found employment with the Apothecaries' Company of Ireland as their chemist, but he only remained in that situation four years and then transferred his services to the Royal Dublin Society. In this new sphere his duties were apparently of a similar character, and to his care were committed the books in the Society's library. In 1800 this body appointed several professors and Higgins became Professor of Chemistry and Mineralogy, a post he occupied until his death in 1825. He was elected a Fellow of the Royal Society in 1806. Higgins was one of the first chemists in the British Isles to embrace the antiphlogistic views of the French chemists, and wrote an important treatise in support of the new theory, which he published in 1789. This volume of nearly 300 pages, entitled "A Comparative View of the Phlogistic and Antiphlogistic Theories with Inductions," is illustrated with particulars of many experiments, which led the author to enunciate, with alacrity which is unmistakable, the principle now known as the "law of multiple proportions." In this particular aspect of what afterwards became the Daltonian atomic theory he anticipated Dalton by thirteen or fourteen years. It was a pity that at a subsequent date (1814) he intimated that Dalton had acted the plagiarist. To-day we can forgive the chagrin of William Higgins and give him his due, and this cannot be done better than in the words of Robert Angus Smith in his "Memoir of Dalton and History of the Atomic Theory." He says: "I look upon him [Higgins] as the first man who ever in his imagination formed a correct atomic compound. . . . He expressed the fact of atomic simple and multiple proportion, which is the foundation for all the other atomic laws, although in his mind it was not raised to the dignity of a great law, and it is for great laws only that we can give great honours in this case. Higgins speaks so clearly and simply that we can readily believe that he would have illustrated the laws of chemical combination with great beauty had he seen the great value of his ideas." This was written in 1856. In a recent communication to the Royal Dublin Society (January 1929), J. Reilly and D. T. MacSweeney review the work of Higgins and say that his formulas are more related to modern formulas than are those of Dalton. The name of William Higgins should never be omitted from the history of chemistry.

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Editorial Articles

Force Majeure in Photographic

Most of our readers are aware of the untiring efforts which have been made during the past eighteen months to organise the photographic trade, and in this way prevent the entry of undesirable dealers, eliminate price-cutting, and regulate other matters. So far as members of the Photographic Dealers' Association are concerned, co-operation between themselves and the manufacturers appears to be proceeding satisfactorily, but, large as is the membership of this body, it is not yet all-embracing. One of the points frequently stressed at meetings of the Association has been that it was the dealers who approached the manufacturers with proposals for placing the trade on a satisfactory basis. Both sides have now formed representative bodies from which a joint council has been inaugurated to deal with the various questions which arise. So much was fairly straightforward, but difficulties occurred when it came to a question of "unrecognised" dealers who purchased their supplies exclusively through wholesalers, particularly druggists' sundriesmen. The wholesalers are to be represented on the joint council. It now seems that the manufacturers are so desirous of allowing their goods to reach the public through the recognised channels that restriction of the wholesale trade has become just as important as regulation of the retail side, and to achieve this end it is hoped to curtail the number of wholesale photographic suppliers to about twenty. Such discrimination is not only unfair, harmful to both wholesaler and dealer, but does not really help the manufacturers to control retail distribution. Moreover, monopolies are contrary to all British ideas of fair play, and in this restriction there is a danger of such a situation arising. Chiefly due to amalgamations, the number of wholesale houses in this country tends to become less and less, yet we are not aware of any suggestion that

the number of wholesale photographic sundriesmen should be maintained at not less than a certain minimum number. There is still a number of chemists who are not members of the Photographic Dealers' Association, and many of these, like many who are members, obtain most if not all of their photographic supplies from druggists' sundriesmen. Now these wholesalers are among the mainstays—the arteries would perhaps be more accurate—of pharmaceutical business, and inevitably their interests are of importance to manufacturers and dealers. If the photographic trade is to develop as most of those in it ardently desire, then wholesale sundriesmen are as necessary as they are in the drug trade. But this brings us back to the control of the retailer through the wholesaler. So far as chemists are concerned, most of them deal with two druggists' sundriesmen, and since nearly all such houses already supply photographic materials to recognised classes of retail dealers, i.e., photographic dealers, chemists, stores with a photographic department, opticians and photographers (the last-named generally purchase from one of the wholesale photographic sundriesmen who conducts a special branch for their requirements), the object is not easy of attainment. We learn that the manufacturers invited the sundries houses to supply them with a list of their customers, a proposition which was naturally refused, though it is understood that this matter is now being arranged through a firm of accountants. As all who have hitherto traded in photographic materials are not to have their supplies curtailed it would seem a simpler procedure to recognise as wholesalers all druggists' sundriesmen who are connected with the Proprietary Articles Trade Association and all their customers in the above-mentioned recognised classes of retail dealers. New accounts could then come before the joint council.

Copper Sulphate Fluctuations

THE extraordinary rise which took place in the price of copper sulphate in the latter part of the past month in consequence of the frenzied advance in the value of the metal, was already referred to in our columns on March 30 (pp. 393-94), together with the similar position in lead products. These happenings were naturally viewed with dismay in the European legitimate trade and aroused more irritation on the part of manufacturers and consumers when the fact was revealed that the record rise in either copper or lead was largely the outcome of reckless American manipulation, because at no time has there been any actual scarcity of these metals. The price of rough standard bar copper was taken up to £97 15s. a ton, the highest figure touched since the year 1920, which was still within influence from the war. The market in the earlier part of that year was still under Government control. It was, of course, not to be expected that the price would remain for very long in the neighbourhood of £100, which figure was actually paid privately for forward delivery when the excitement was greatest. Within the last few weeks there has been a sharp swing of the pendulum in the other direction, resulting in a fall by about twenty-five per cent. in metal to £74 5s. per ton. Sulphate prices, which had been inevitably run up to as high as £35 a ton f.o.b. for casks, less the usual five per cent. discount, tumbled sharply in sympathy with the metal, and the latest terms are in the neighbourhood of £29. This is still about £1 10s. a ton above the figure ruling at the close of last year, when the cost of bar copper stood at £74 10s., but since the lowest touched last week there has been a recovery in the metal by nearly £5 a ton. The current value of sulphate would appear to be about high enough, but there is some nervousness that in view of the marked depletion of the home warehouse stocks in the course of this month the metal position is apt to become more stringent. Hence sulphate makers, although having by now fairly well covered their needs for this season, are

quoting rather stiff terms as a matter of precaution. As compared with a year or so ago, the present price of this commodity indicates an appreciation of about £2 10s. per ton. For the year 1927 the average price of bar copper was about £55 14s., and for last year £63 14s. a ton. Since then the stock of rough bar metal has been further depleted and is now very small indeed, for a large quantity was lately shipped to America for conversion into refined, which operation was induced by the fact that there was a huge margin of profit to the refiners. For some time past our export trade in copper sulphate has been almost entirely in the hands of the British Copper Sulphate Manufacturers' Association, so that the market is well under control, although there are one or two small makers outside the association whose terms are more or less in line with those quoted on behalf of associated makers. As usual at this time of year, and until towards the autumn, the quantities exported tend to diminish to comparatively small dimensions. The fair quantities shipped in the first quarter of this year were fully in line with the corresponding figures for last year. For some years running there has been a steady recovery in the export trade. The total shipped for last year amounted to 47,857 tons, against 42,401 tons for 1927 and 38,038 tons for 1926. In that year there was a slight setback, which has easily been made good. The largest takers of the British product are still France and Italy, to which countries during 1927 12,818 tons and 7,511 tons respectively were dispatched, against 8,391 tons and 8,075 tons in 1926. These figures are very considerably less than they used to be before the war, but, of course, it is well known that since then production both in Italy and France has been very materially increased. Within the last few years rather more important quantities have been shipped to Russia, and the takings from that quarter may easily be further increased, although a good amount of sulphate is being produced in Russia. In the Near East both Greece and Rumania are still taking fair quantities, but not so much as they were before the war. The British industry is still operating at considerably below pre-war capacity, but it is holding its own in the export market.

The Adventures of Plants

THE following is the substance of a letter by Mr. A. B. Rendle, president of the Linnean Society, printed in a recent issue of "The Morning Post"—

"We may question whether Nature is ever 'in equilibrium'; certainly the disturbing effect of man is great. The prickly pear and other introduced 'weeds' have been responsible for trouble in Australia. But we need not go to the Antipodes for instances of trouble. The whitlow pepperwort (*Lepidium Draba*), said to have been introduced into England with the bedding straw of troops disembarked at Ramsgate from the Walcheren expedition, has become an agricultural pest in Kent, and the American water-weed, introduced into this country about 1840, for a time seriously impeded navigation in our waterways.

"Another New World species, the yellow mimulus, has become naturalised in many parts of Britain, and is a striking feature on the banks of streams or in boggy places. These are outstanding cases of introduced plants which have become part of our flora. Some years ago Miss I. M. Hayward and Dr. G. C. Druce published a list of immigrants which had appeared on the Tweedside near Galashiels, from the washings of a neighbouring woollen factory. The list included 348 species, about 140 of which were credited to South Africa, Australasia and South America. Very few of these, however, persisted for any length of time.

"Doubtfully native species form a considerable proportion of the present-day flora of our islands; for example, the latest addition to our country floras, that of Buckinghamshire, by Dr. Druce, enumerates 1,362 species, only 939 of which are regarded as truly native."

Pharmaceutical Society of Great Britain

Examination Results

THE following are the results of the examinations held in London during the present month:—

	No.	PRELIMINARY SCIENTIFIC				CHEMIST AND DRUGGIST QUALIFYING			
		Absent	Failed	Referred	Passed	Absent	Failed	Referred	Passed
Entered for whole examination ...	16	3	8	2	3	2	1	—	—
Entered for C. and D., and referred subject in Prelim. Sc. ...	11	—	—	3	8	4	3	1	—
Entered for Prelim. Sc. only	470	18	181	104	167	—	—	—	—
Referred subject in Prelim. Sc. only ...	92	2	—	23	67	—	—	—	—
Entered for Chemist and Druggist only	325	—	—	—	—	14	131	92	88
Referred subject in Chemist and Druggist examination	97	—	—	—	—	—	—	28	69
	1,011	23	189	132	245	20	135	121	157

Referred in one subject:—Botany, 51; chemistry, 63; physics, 18; pharmacognosy, 25; pharmacy, 74; pharmaceutical chemistry, 11; forensic pharmacy, 11; total, 253.

CHEMIST AND DRUGGIST QUALIFYING EXAMINATION

The following, having satisfied the examiners in this examination, have been registered as chemists and druggists:—

Adcock, W. J., Wolverhampton	Evans, Edna A., Merthyr Vale
Adelstein, Barney, Stockwell	Evans, John, Basingstoke
Altshul, Walter, Birmingham	Farmer, J. A., Ryde
Beaumont, Harold, Hyde	Fox, J. P. O., Horwich
Beynon, E. J., Clynderwen	Frost, W. G., Ilford
Biggin, E. H., Bourne-mouth	Gibson, E. H., Weston-super-Mare
Born, F. L., Barry	Gore, H. L., Hindley Green
Broad, F. S., Kenilworth	Grant, Gladys M., Maidstone
Bullivant, R. I., Boston	Green, Alec, Bradford
Capps, R. F. S., Leicester	Green, Phyllis M., Marple
Caplan, David, Liverpool	Gregory, C. E., Wigan
Cawdell, J. B., Thrapston	Gregory, M. L., Ports-mouth
Cheeseman, W. A. T., Amptill	Griffiths, T. W., Dalston
Cohen, M., Cape Town	Hallett, C. H., Bristol
Coleman, W. L. B., Norwich	Hamer, James, Accrington
Collins, A. E., Aintree	Hansen, J. W., Peterborough
Cornhock, G., Forest Hill	Harding, A. H., Cambridge
Connor, E. J., Cape Town	Harper, L. H., Southampton
Dale, E. J. W., Wolverton	Harries, B. E., Glyn Abbey
Davie, G. B., Wavertree	Harrison, C. G., Chiswick
Davis, R. J., Walton	Hibbs, C. A. L., Moseley
Desvaux de Marigny, V. H. R., South Kensington	Hilton, N. C., Manchester
Dodds, Margaret V., Darlington	Hodgkinson, Dennis, Hull
Domerezhsky, C., Cape Town	Holden, D. F., Dorking
Eccles, William, Harlesden	Holden, Thomas, Blackburn
Edwards, J. M., Bourne-mouth	Hooper, Joan E., Par Station
Edwards, W., Bryncaethin	Hopkins, Mary I., Dowlais
Elliott, E. G., Westbury	Hulse, W. N., Grimsby
Ellis, S., Bridlington	Humphreys, D. K., Merthyr-borough
Evans, A. A., Pontypridd	

Humphreys, Nansi D., Mardy	Roberts, C. B., Kenilworth
Humphreys, O. W., Bethel	Robinson, R., Darlington
Hurford, J. H. F., Thames Ditton	Rock, G. H., Barnsley
Jacks, F. T., Stone	Rosenberg, N., Johannesburg
James, A. H., Cardiff	Rothwell, W., Little Lever
Jenkins, Elizabeth M., Putney	Rowlands, O. R., Anglesey
Kaye, Josse, Johannesburg	Rudkin, D. C. W., Colchester
Kelly, John, Preston	Rutter, Lydia K., Manor Park
Kneller, F. E., Nottingham	Sabine, Ida J., Putney
Lander, J. W. G., Coalville	Sackett, E. F., Margate
Levett, G. H., Sheerness	Sales, S. B., Boscombe
Levi, Joshua, Manchester	Saunders, J. L., Shoreham
Livesley, Alec, Hayfield	Shoebridge, W. J., Brighton
Long, H. J., Salisbury	Simpson, J. A., Tarporley
Lovering, W. F., Kingsbridge	Smith, S. T., Bolton
Mayfield, A., New Bosford	Spetch, F. B. R., Ashton-in-Makerfield
Melton, W. A., Lincoln	Stephens, G. A., Marden
Miner, B. R., Ripley	Stones, S. B., Lincoln
Moore, H. F., Brockley	Storey, E. K., Grange-over-Sands
Morgan, D. G., Carmarthen	Stroud, F. W. F., Anfield
Mossop, G., Barrow-in-Furness	Sykes, Stanley, Huddersfield
Mote, S. G., Harrogate	Taylor, G. W., Walkley
Murray, Lina M., Cardiff	Taylor, Leonard, Uxbridge
Musson, T. W. E., Dover	Theaker, Nancy, Bedford Park
Nicholson, L. R., Chertsey	Thomas, Edward, Aigburth
Nochamson, H., Oudtshoorn	Thomas, H. N., Aberaman
Nolan, S. B., Nottingham	Thompson, L. E., Chester-ton
Norsworthy, J. W., Plymouth	Tidey, A. C., Maghull
Northridge, Norah E., Hornsey	Tinsley, J. L., Birkenhead
O'Connor, W., Lincoln	Tohman, F. G., North Petherton
Offord, R. E. B., Forest Gate	Tomlinson, L. F., Moston
Openshaw, R., Horwich	Turner, H. F., Uxbridge
Packer, W. A., Leicester	Turner, J. H., Felixstowe
Padwick, G. B., Brighton	Usher, W. H., Southampton
Palmer, R. S., Stoke-on-Trent	Varty, M. P., Bootle
Park, S. R., Heversham	Wallace, Isabelle R., Ashton-under-Lyne
Parker, S. S., Bourne-mouth	Walton, Roy, Darwen
Parry, Owen, Carnarvon	Warhurst, Eva, Mosley
Pass, C. K., Burton-on-Trent	Watkins, C. R., Hull
Pearce, A. H., Corston	Watt, A., Fraserburgh
Powell, B. L., Merthyr Vale	Webb, J. L., Warminster
Procter, T. F., Eastbourne	Webber, J. B., Barnstaple
Pugh, R. R., Llandovery	Weeks, F. E., Newport
Rees, D. L., Gowerton	Welch, H., Rotherham
Rees, T. G., Port Talbot	Westley, C., Paddington
Reynoldson, W., Dipton	Williams, D. E., Colwyn Bay
Richards, R. G., Pwll	Williams, Gwyneth, Llandudno
Richardson, W. L., Leicester	Williams, J. R., Landore
	Wilson, James, Waterloo
	Yeates, C. J., Plymouth

Branch Meetings

Aberdeen.—The annual meeting of the Aberdeen and North-Eastern Scottish Branch was held in the Palace Hotel, Aberdeen, on April 17. Mr. W. F. Hay was in the chair, and was supported by Provost W. Stewart Taylor (vice-chairman), Mr. J. Rutherford Hill, Mr. W. Park (treasurer), and Mr. W. Watt (secretary). Mr. Hay said that they regretted the absence of their great friend, Dr. Tocher, who, unfortunately, was unable through illness to attend, but they all wished him a good and speedy recovery. Mr. J. Rutherford Hill, in the course of an instructive address on *Current Pharmaceutical Topics*, said that while qualified medical practitioners were the only proper prescribers of medicines, qualified pharmacists should be the only dispensers of such prescriptions. This

had been secured in Ireland since 1875; it was common in all civilised countries; it obtained in Great Britain under National Health Insurance, and it ought to be extended to include all medical prescriptions. It was highly gratifying to find that, taking Scotland as a whole, the N.H.I. prescription-testing scheme had sustained the high reputation of dispensing chemists for accuracy and quality in the dispensing of medicines for insured persons. He was particularly gratified by the clean sheet presented by panel chemists in Aberdeen County. In one case, twenty-four quinine powders were reported as unevenly divided. They had probably been divided by the eye, a method by which a skilled dispenser could save much time and attain what was practically a high degree of accuracy. A scrutiny of the weights of each powder revealed an average deficiency of 0.1 gr. A patient taking such powders would be substantially taking the dose the prescriber expected—about 2 gr. In one case, the test prescription was for adhesive plaster. It was written by a doctor whose prescriptions had been frequently dispensed. These were construed by the chemist who regularly dispensed his prescriptions as meaning sometimes adhesive plaster on calico, sometimes rubber plaster in tape form, but never as adhesive plaster spread on holland. The Manchester checking Bureau reported that the adhesive plaster on calico which was supplied was wrong, because the drug tariff said that when adhesive plaster was ordered the chemist must supply adhesive plaster on holland. This decision was due to the erroneous assumption that the condition in the English drug tariff applied also to Scotland. There was no such rule in Scotland. In one case of a test prescription for quinine sulphate, the analyst reported a 50-per-cent. deficiency, and said the quantity prescribed was one drachm. The prescription was submitted to a practical pharmacist with an exceptionally wide experience in prescription reading; he read it as half a drachm, thus agreeing with the dispenser. In Sweden they had a law by which careless writing by a doctor was a punishable offence. All this matter of prescription-testing was one in which the utmost consideration was essential, and the fact must be clearly recognised that in many instances the dispenser had to exercise his discretion. A question had been raised as to employing a legal adviser to appear with the chemist in any case coming before the Pharmaceutical Service Subcommittee. Legal advice was always valuable, and in any very serious case that plan might be advisable. As a general rule, however, it was better to have a matter of this kind dealt with quietly and without publicity. The Pharmaceutical Committee was available, and the Pharmaceutical Standing Committee (Scotland) was ready to give any assistance. Attention was also directed to the new N.H.I. Regulations to come into operation on May 1. On the question of duplicate N.H.I. prescription forms it had been unanimously decided at a joint meeting of the Board of Health and representatives of Insurance Committees, panel practitioners and panel chemists that the scheme of duplicate forms should be adhered to, and that Pharmaceutical Committees should insist on the fulfilment by prescribers of this part of their contract of service. Parliamentary representation and other matters were also referred to. It was also pointed out that the election of Health Insurance Committees and Pharmaceutical Committees was now in progress. At the close of the address questions were dealt with; among members taking part in the ensuing discussions were: Dr. Bryant, Messrs. A. L. Bruce, J. Farquhar, H. M. Dugan, M. C. Ross, M. K. Watt, R. Alexander (Strichen), A. S. Weir (Kemnay), J. D. Christie and R. W. Garrow. Provost Stewart Taylor proposed a vote of thanks to Mr. Rutherford Hill. The treasurer submitted his report, showing a credit balance of £38 18s. 6d. The secretary reported a Branch membership of 203, compared with 204 last year. The Executive elected for next year were: *Chairman*, Provost W. Stewart Taylor, Inverurie; *Vice-Chairman*, Mr. James Farquhar; *Treasurer*, Mr. W. A. Park; *Secretary*, Mr. W. Watt, to whom it was agreed to give an honorarium. The *Committee* were re-elected, with the addition of Mr. W. F. Hay. Dr. Bryant said it was incumbent on them to put on record the valuable services rendered to the Branch by Mr. Hay, their retiring chairman; he had held the office for six years, and had given valuable services to the craft. The motion was carried with applause.

Blackburn.—The question *Is Pharmacy a Lost Cause?* formed the subject of a debate on April 17, under the joint auspices of the N.-E. Lancashire Branch of the Society and the junior section. Mr. Arthur Dobson (Branch chairman) presided. Mr. C. Birks and Mr. J. Watson took up the position that pharmacy was not a lost cause, and Mr. J. J. Ridley and Mr. Walter Pickup took up the attitude that it was. Mr. Birks said in a matter of this kind it was important not to overlook the question of time. What might seem a failure at the present might turn out later to be a success. Emphasising the importance of pharmacy to man, Mr. Birks said that for centuries man had used remedies for his ills. By the Health Insurance Acts the advantage was realised of having separated sections for prescribing and dispensing, which, at the same time, placed a check on the work of the prescriber. This showed that the standard of the profession, and its advantages, were being gradually raised. They would not rest on their oars, but demand improved conditions at every available opportunity. The standard of pharmacy had been raised, and would continue to improve, and the cumulative evidence of the last generation showed that it was not a lost cause. Mr. Watson supported Mr. Birks's conclusions. He did not accept the description of the pharmacist as the distributor of patent medicines. These sales were thrust upon them by circumstances, and had little bearing on the issue. There was abundant evidence that the public would prefer to trust the trained pharmacist and the doctor than the quack. There was the argument that the pharmacist did not stick to pharmacy for his living. But the materials with which he dealt had a close connection with pharmacy and were perfectly legitimate. It was becoming more and more recognised that the trained pharmacist was absolutely essential to the health and well-being of the nation as a whole. He thought the prospects of the profession were even brighter than they were when N.H.I. came into vogue. Arguing to the contrary, Mr. Ridley suggested that the greater part of the pharmacist's day was spent in something different from the compounding of medicines, for which he was supposed to have been specially trained. Out of a nine-hour day, nearly eight hours were devoted to business which the holder of a patent-medicine licence could carry on. The old-day pharmacists had a serious view of their profession, commanded respect from the general public and received a decent remuneration for their work. Medicine and dentistry had undergone a great change. But what of pharmacy? They had very little public respect and less professionalism. They were the dupes of patent medicine proprietors, and they found chemists styling themselves "agricultural pharmacists," "photographic chemists," and so forth, because there was not a living in pharmacy itself. Their skill and training were not being put to the proper use, and they must of necessity develop the business side. He estimated there was one registered chemist for nearly 9,000 people. If pharmacy was not a lost cause, surely there would be ample pure pharmaceutical work to engage the attention of all these qualified men in doing nothing but compound medicines. To-day this work was done in a small degree by the doctors, but in the main it was devolving on the wholesale house. The process of mass production by unqualified labour gave the preparations produced a false economical value. The qualified retail pharmacist had become a mere distributor. Mr. Pickup, supporting Mr. Ridley, complained that the trade of the pharmacist had been nibbled at by other traders. He was prepared to admit that some men did make a success of pharmacy, but they were in the minority, and even these had to rely on a variety of side-lines. In the general discussion which followed, Mr. Lightbown, ex-president of the Branch, urged pharmacists to prepare their own mixtures. He supported the view that pharmacy was not a lost cause. When N.H.I. was introduced, the work of dispensing could have been undertaken by the doctors or by the large multiple firms. He believed pharmacy was in a better position to-day than it had ever been before and that the time was coming when every qualified pharmacist would have to be a member of the Pharmaceutical Society. There would then be some form of control in the matter of etiquette as was the case with the B.M.A. and other organisations. They would never get what they wanted without work and

without fighting for it. He hoped that in the days to come the doctor would not do any dispensing. Mr. Fred Law (secretary) said pharmacy had achieved something already. Though progress had been slow, it had been sure. The chairman supported the view that pharmacy was not a lost cause, and he saw nothing amiss with the pharmacist who relied partly on his horticultural or photographic trade. He agreed that the ideal was "pharmacy for the pharmacist," and they were working for this millennium. He would like to see the day when no one but the qualified man would be able to sell drugs.

Cardiff.—The annual meeting of the Cardiff and District Branch of the Pharmaceutical Society was held on April 11, Mr. Reg. Davies (Penarth) in the chair. The secretary (Mr. S. W. Hague) presented the annual report and financial statement. The principal matters dealt with in the report were the meetings addressed by members of the Council. Support had been accorded to the Welsh College of Pharmacy in the annual presentation of silver and bronze medals to the students for competition. The suggestion was made that the Branch would be the more easily canvassed and organised were it to be sub-divided into two or more smaller areas. The balance sheet showed a credit of £89 9s. 2d. The report and statement were adopted. A discussion was introduced as to the advisability of amalgamating the local Association with the Branch. Mr. E. Poole proposed, Mr. J. D. Jenkin seconded, that the Association be wound up, and the membership be transferred to the local Branch. The election of officers for the year resulted as follows:—*Chairman*, Mr. S. B. Eason; *Vice-Chairman*, Mr. T. H. Lewis; *Secretary*, Mr. J. Murray; *Assistant Secretaries*, Mr. Hopkins (Barry), Mr. J. Malcolm Davies (Cardiff), with another to be elected at a later meeting; *Treasurer*, Mr. R. Davies; *Committee*, Messrs. A. Hagon, Jabez A. Jones, J. D. Jenkin, J. Reynolds, A. E. Ward, J. T. Day, Parry Williams, D. Brims, A. S. Johnson, E. Poole, W. G. Wigley, A. Stephens, J. Lee Jones, E. H. Pym, S. W. Hague. The candidature of Mr. E. T. Neathercoat, who had received adoption by the Parliamentary division of Cardiff South, was considered. It was announced that Mr. Neathercoat would address the pharmacists at an informal supper on April 24. The new chairman (Mr. S. B. Eason) then formally took the chair and addressed the meeting, thanking the members for their promised support at the forthcoming Council election in May. Mr. Eason gave his views on pharmaceutical matters. Votes of thanks to the retiring chairman (Mr. Reg. Davies) and the secretary (Mr. S. W. Hague) were accorded.

Greenock.—A meeting of the Glasgow and South-Western Scottish Branch of the Pharmaceutical Society was held in Greenock on April 11. Mr. H. P. Arthur (chairman of the Branch) presided. After tea an address was delivered by Mr. J. Rutherford Hill. Speaking on *Current Pharmaceutical Topics*, Mr. Rutherford Hill said district meetings did good. Referring to jury service he explained that the Juries Act 1862 did not apply to Scotland, and applied only to pharmaceutical chemists in England and Wales. There was extreme reluctance in official circles to grant any extension of exemptions. Pharmacists in business had a most reasonable case for exemption, as their shops could not be open without a pharmacist in charge. Prescriptions for poisons or "dangerous" drugs or H.H.I. prescriptions could not be dispensed, and under the N.H.I. contracts the shop is required to be open. The stringent Dangerous Drugs Act Regulations and the poisons regulations required the continual presence in the shop of a properly qualified person. Although there was no statutory right to exemption, such exemption had been obtained on explaining the situation to the clerk of court. Each case had to be taken on its merits, and it would be well in case of difficulty to apply to the Society's office in Edinburgh. Speaking of examinations he mentioned that apparently there was a distinct misunderstanding as to acceptance of the Scottish Education Department's Certificates for registration as a student. The day school certificate (higher) which was of the standard of the old intermediate certificate was accepted. It was erroneously assumed that nothing less than the higher leaving certificate would be accepted. The recent severe epidemic of influenza had reflected itself in a largely increased demand for medicines under N.H.I.

medical benefit. In Glasgow alone the drug account for January 1929 was almost double the amount for 1928. In the Scottish burghs the number of N.H.I. forms showed an increase of 67 per cent., the Scottish counties an increase of 40 per cent., and a general increase over all of 57 per cent. The burgh drug accounts showed an increase of 57.6 per cent., the Counties 30.36 per cent., and over all 47.6 per cent. There would probably be a very decided fall, as was usual after the epidemic passed away, and by the end of 1929 the accounts would be nearer normal. The Government auditor had now fixed the standard figure for calculating the drug account fund, which had been increased for 1928 from the provisional figure 1,758,000 to 1,763,000, an increase of 5,000. For 1929 the provisional figure was 1,760,000. New Medical Benefit Consolidated Regulations had just been issued by the Department of Health for Scotland and would come into operation on May 1. Among new points introduced by these regulations were the following:—(1) When the Panel or Insurance Committee do not satisfactorily deal with excessive prescribing the Department may take action; (2) in the case of minor alterations in terms of service by chemists it may be agreed between the Pharmaceutical Standing Committee (Scotland) and the Department that intimation to the local Pharmaceutical Committee will take the place of intimation to each panel chemist; (3) a chemist is prohibited from holding out inducements to insured persons to take their prescriptions to his shop; (4) a chemist may refuse to supply medicine requiring a bottle unless the insured person produces a suitable bottle or pays the deposit price; and (5) no person whose name has been excluded or removed from a list of panel chemists may act as representative, deputy or assistant to any panel chemist. Several other current topics were discussed and a number of questions were answered. The following members took part in the discussion:—Miss Bain, Messrs. Allin, Campbell, Sinclair and Wright. Mr. Guthrie gave a statement on the financial position of the Society, and the chairman made appeals on behalf of the Benevolent Fund and the Glyn-Jones Memorial Fund.

Manchester.—The annual general meeting of the Manchester, Salford and District Branch of the Pharmaceutical Society was held on April 17, Mr. E. H. Simmons in the chair. Mr. T. Miller (secretary) presented the report of the executive, which gave a *résumé* of the work of that body during the past year. In the discussion which followed Mr. J. H. Nidd said he appreciated the reference to the Sir Wm. Glyn-Jones Memorial Fund. The younger generation of pharmacists was possibly not aware of the great advantages that accrued to chemists through the foresight and enterprise of the late Sir William. He emphasised the necessity of supporting this fund. The vice-chairman, Councillor R. G. Edwards, in proposing the adoption of the report, said he was gratified at the publicity attained in the Press by their meetings. He felt that this was all in their favour. Mr. J. H. Nidd seconded, and it was unanimously agreed to. The treasurer (Mr. A. J. Pidd) submitted his report and balance sheet. This showed a balance in hand of £38 3s. 8d. The report was adopted. The election of the Executive resulted as follows:—*Manchester*: Miss Roberts, M.Sc., Messrs. H. Brindle, B.Sc., J. Grier, M.Sc., Councillor R. G. Edwards, J. H. Franklin, T. Miller, A. J. Pidd, A. E. Thorpe. *County area*: Messrs. E. Berry, M.Sc., W. Edwards, W. Kirkby, M.Sc., R. B. Maskell, W. I. Scholes, W. Walmsley. *Salford area*: Messrs. E. H. Simmons, W. Lyle Davison, V. J. Meadows and H. Stout were re-elected. Mr. J. H. Nidd proposed the following resolution: "That the members of the Manchester, Salford and District Branch of the Pharmaceutical Society, at the annual general meeting, express their confidence in Mr. E. H. Simmons, one of the retiring members of the Council and pledge themselves to do everything in their power to secure his re-election." He made a personal appeal to the members to take an interest in the candidature of Mr. Simmons, who for the past six years had in a special sense been their representative on the Council. Councillor R. G. Edwards seconded. The resolution was carried with acclamation. Mr. Simmons briefly acknowledged their vote of confidence in him. Votes of thanks were accorded to the treasurer and the secretary for their services during the year.

Dispensing Notes

Abstract of a Paper read recently before the Liverpool Chemists' Association, by Mr. Harold Wyatt, Ph.C.

THE following notes will serve as a means of emphasising the utility of marginal notes.

Ichthylol	...	...	gr. iij.
Acid. salicylic.	...	...	gr. x.
Pulv. amyli	...	...	3ij.
Pulv. zinci oxid.	...	...	3ij.
Paraffin, mollis	...	ad	3j.

Rub the salicylic acid with the powders and sift into the soft paraffin, mixed with the ichthylol in a warm mortar. The reason for this is that if the salicylic acid be rubbed with the ichthylol decomposition ensues, ammonium salicylate being formed and ichthylol-sulphonic acid liberated.

Morphinæ sulphatis	...	...	gr. ½
Cocainæ hydrochlor.	...	...	gr. ⅛
Ext. suprarenalis	...	...	gr. iij.
Ol. theobromatis	...	ad	gr. xv.

The suprarenal powder not being to hand, the medical man permitted the use of suprarenal tablets rubbed fine and incorporated in the melted mass—with such satisfactory results that suppositories from this form are still regularly prescribed by him.

Arsenici albi	gr. ⅓
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Fiat pilula

Mass with manna and althæa and make to 2-gr. size.

Ferri et quininæ cit.	3j.
Tinct. nucis vomicæ	...	...	℥xxx.
Spiritus chloroformi	...	...	3ij.
Aq. menthæ piperitæ	...	ad	3vj.

This is given as an example of a mixture which requires a lot of filtration through cotton-wool before it became bright. This probably arises from the fact that the essential oil from the peppermint water is taken up by the chloroform and requires very vigorous shaking and repeated filtration before the liquid runs clear.

Acidi carbolici	...	...	gr. x.
Camphoræ	...	...	gr. iij.
Aquæ	...	...	3ij.
Glycerinum	...	ad	3j.

Dissolve the camphor in the carboic acid with gentle heat, add the glycerin and, when cold, the water, shaking well.

Radiciæ gentianæ pulv.	...	...	gr. xl.
Radiciæ rhei pulv.	...	...	gr. xvij.
Radiciæ zingiberis pulv.	...	...	gr. viij.
Sodii bicarbonatis	...	...	gr. Lxxx.
Aq. menthæ piperitæ	...	ad	3viij.

To make this a satisfactory and even mixture it is important that it be washed through fine muslin.

Potassii iodidi	...	...	gr. xx.
Quininæ disulph.	...	...	gr. viij.
Syrupi calcii lactophosph.	...	...	3iij.

To avoid liberation of iodine and formation of a precipitate of iodosulphate of quinine in course of time, dissolve the quinine in enough acid. hypophosph. B.P.C., and add it to the mixture after dissolving the iodide in the syrup.

Chloretoni	...	...	gr. x.
Plumbi iodidi	...	...	gr. v.
Ol. theobrom.	...	ad	gr. Lx.

If for stock, it is better to run the mass in gelatin capsules, as otherwise the chloretone gradually evaporates—at any rate on the surface of the pessary.

Potassii iodidi	...	...	3j.
Sodii nitritis	...	...	gr. iv.
Tinct. nucis vom.	...	...	gr. xxx.
Ol. menthæ piperitæ	...	...	viij.
Spt. chloroformi	...	...	3j.
Infusum gentianæ co.	...	ad	3vj.

To avoid acidity and the consequent liberation of nitrous acid from the nitrite and the certain production of varying amounts of iodine from the iodide, add sodii bicarb. gr. xx to the mixture and the nitrite last.

Potassii iodidi	...	...	gr. Lxiv.
Sodii nitritis	...	...	gr. xxxij.
Syrupi aurantii	...	...	3j.
Aq. chlorof.	...	ad	3viij.

The same remarks apply to this mixture as to the previous example.

Ammon. chloridi	...	...	gr. xl.
Vini ipecacuanha	...	...	℥Lx.
Syrupi	...	...	3iss.
Ext. glycyrrhizæ liq.	...	...	℥Lxxx.
Aq. anisi	...	ad	3iv.

A few drops of liq. ammon. added to this mixture make a great improvement by dissolving the glycyrrhizin.

Argenti nitratis	...	...	gr. j.
Ol. theobrom.	...	ad	gr. xc.

Rub the nitrate well with 30 gr. of talc and add to the melted cacao butter when nearly cold. As in course of time these pessaries become tinted by the action of light, wrap them in red waxed paper.

Butyl-chloral hydratis	...	...	3iss.
Tincturæ gelsemii	...	...	3iss.
Aq. chloroformi	...	ad	3vj.

Dissolve the butyl-chloral in fl. 3iv. of glycerin and fl. 3ij. of water by the aid of heat, and pour cold into the other ingredients, mixed with acacia mucilage 3j.

Phenazoni	...	...	3ij.
Butyl-chloral hydr.	...	...	3ij.
Caffeinæ citratis	...	...	gr. xxxvj.
Ext. glycyrrhizæ liq.	...	...	3vj.
Aq. chloroformi	...	ad	3vj.

This gives a muddy mixture from the glycyrrhizin thrown down by the free citric acid from the caffeine citrate. To avoid this use half the weight (gr. xvj.) of the alkaloid caffeine and dissolve it in the butyl-chloral hydrate in solution in fl. 3j. of glycerin, then pour in the phenazone dissolved in the aq. chloroformi, and finally add the ext. glycyrrhizæ liq. Mixed in this way there is only a very slight precipitate on standing.

Zinci oxidi	...	...	3j.
Adipis lanæ anhydrosi	...	...	3l.
Ol. olivæ,	...	...	...
Aq. calcis aa. partes æquales	...	ad	3iv.
Ichthylol	...	...	3j.

Rub the lanolin and olive oil smooth in a warm mortar; add the lime water, and then pour in the zinc oxide previously rubbed together in another mortar with a little lime water and the ichthylol, and mix by shaking.

Potassii permang.	...	...	gr. j.
Tabellæ thyroidei	...	...	gr. viij.
Fiat pulvis et divide in capsules octo.	...	...	...

Triturate the permanganate with talc q.s., mass with castor oil or a little powdered oil of theobroma, and then rub lightly with the powdered tablets of thyroid and pack into hard capsules. If mixed lightly, the powder keeps without change for weeks, even if dispensed in cachets.

Acidi carbolici	...	...	3ij.
Calaminæ præparatæ	...	...	3iij.
Zinci oxidi	...	...	3iij.
Pulveris amyli	...	...	3iij.
Liq. plumbi subacet. fort.	...	...	3iv.
Glycerini	...	...	3iv.
Aquam	...	ad	3vj.

Add the liq. plumbi last, or the carboic acid will give with it a dense precipitate difficult to diffuse.

Sodii bicarb.	...	...	3ss.
Mag. carb. pond.	...	...	3j.
Calcii carbonatis	...	...	3j.
Bismuthi oxycarb.	...	...	3j.

What is meant by "calcium carbonate" in this? Following the usual rule in pharmacy, it should be prepared chalk and not precipitated chalk. I take it that for making such a thing as calcium lactate or phosphate the precipitated chalk should be used, but for mixtures or powders the smoother prepared chalk is preferable.

Tinct. iodi Fr. Codex	3ij.
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The drops: Five to 15 drops in milk three times a day after meals.

The formula of the 1908 or previous Codices should be used, as they contain no potassium iodide and are 1 in 10 w/w. The present Codex orders a tincture containing potassium iodide, which is an improvement, so far as the keeping qualities are concerned, but not medicinally.

British Science Guild

A MEETING of the British Science Guild was held in the Mansion House, London, E.C.2, on April 24, the Right Hon. Lord Melchett, D.Sc., F.R.S. (president), in the chair.

The CHAIRMAN, in opening the proceedings, briefly indicated the scope of the three addresses that followed. The problem of the production of artificial fertilisers, his lordship pointed out, was not entirely new. In 1881 Dr. Ludwig Mond had indicated the importance of the researches of Lawes and Gilbert. In 1880, South America exported 750,000 tons of nitrate: the same country now exported approximately 2,500,000 tons per annum, and yet the output of the synthetic product far exceeded that of the natural salt. Billingham produced in 1928 eight times the output of 1924 and four times that of 1927. This year it was hoped the total would reach 750,000 tons. After a brief reference to the foreshadowing of artificial silk by Hooke in the latter part of the seventeenth century, Lord Melchett called upon Sir Frederick Keeble to give an address on

Fertilisers from the Air

By SIR FREDERICK KEEBLE, C.B.E., D.Sc.

[ABSTRACT]

THE speaker gave an estimate of the almost unlimited quantity of nitrogen in the atmosphere—4,000-million-million tons. Mixed with chalk (which was a by-product at Billingham) ammonium nitrate formed a valuable fertiliser. The year 1913 marked a dividing line in the history of the world: prior to that time plants were limited in their supplies of nitrogen, but with the advent of synthetic nitrate all that was changed. One great cause of a lack of prosperity was thus removed. Holland and Belgium led the world at present in the increased use of nitrogen. Holland consumed about 38 lb. of nitrate an acre, Germany about one-third of that amount, Great Britain less, France less still, and the United States only 1.8 lb. Japan, Java and Egypt were great users, and China had increased the consumption by more than 1,000 per cent. during the last few years, while India was just beginning to awaken in that respect. Concentrated fertilisers were now being made—an obvious boon in districts where transport was bad. The British had in this industry a new and great opportunity.

The second address was entitled:—

Rayon (Artificial Silk)

By MR. A. B. SHEARER

[ABSTRACT]

RAYON is the generic name of the filaments produced by any of the recognised processes: "artificial silk" is a misnomer. The rayon industry is already more than three times the size of the silk industry, and ranks only after those of cotton and wool. Sir Joseph Swan devised filaments of this material in 1883 for his gas-filled lamps, and two years later exhibited fabrics made from his yarns. Numerous patents have been granted for different processes. The large-scale manufacture of this product had important reactions on the chemical industry, and engineering had also been stimulated. The commercial product was now so finely spun that 1 lb. made 170 miles of thread, and rayon could be spun much finer than silk. It was estimated that the industry employed 300,000 workers. In 1928, 50,000,000 lb. of rayon was produced in this country.

The third address was on

Synthetic Drugs

By MR. FRANCIS H. CARR, C.B.E., F.I.C.

[ABSTRACT]

OF all the results of modern science perhaps the happiest is the progressive improvement in public health, due to the better understanding of preventive and curative medicine. Chemistry is not the least of the sciences that have contributed to this progress, and medical treatment has become increasingly dependent on the use of substances prepared by chemical synthesis. Chemical substances are employed in medicine for several different types of effect. First, there are those

agents which make good deficiencies due to diet and other causes, as, for instance, a lack of compounds of iodine, or of vitamin D. Second, those hypnotic, analgesic and anæsthetic drugs, of which aspirin and novocain are well-known examples. Of the greatest importance to curative medicine, however, are those substances which, within the human body, exert a direct action upon the disease by destroying the parasitic organisms. Although in this class there may be included the old and well-known drugs, cinchona and ipecacuanha, very few of the old known drugs have been found specifically to act as these do on the invading organisms of disease.

The discovery in 1894 of diphtheria antitoxin, by which the mortality from diphtheria was reduced to one-tenth of its former figure, afforded perhaps the first real indication of the potentiality of drugs actually to overcome disease, and gave some reason to hope that in the course of time chemical substances for counter-acting all forms of disease would be discovered. Basing his work on the theory of their action, Ehrlich was led to discover salvarsan.

The use of dyes which appear to exert their action by selectively attaching themselves to the invading organism has been one important outcome, and to-day acriflavine and trypan blue are well-known examples of dyes very successfully used in medicine. Various new organic compounds of arsenic and antimony have come into use, especially in the treatment of tropical diseases caused by amoeba-like organisms. Many other examples might be mentioned, but it is necessary to add that in regard to only a few of them has the very high percentage of cures observed in the case of the syphilitic remedies been realised, and the problem is proving more difficult than might have been expected from the great success of salvarsan. Progress depends partially on experimental work carried out on animals infected with diseases, many of which cannot be transmitted to animals.

In its normal chemistry the body is continually producing active principles, for the most part secreted by special glands. These principles are chemical substances which control and regulate the body's action, and thus make adjustments to the continual changes of environment to which it is subject.

Of these substances insulin, although not yet made synthetically, affords an outstanding example. Very little is known of its exact chemical nature, and this must first be elucidated before one can speak with any certainty of the possibility of preparing it synthetically. The chemistry of other similar active substances produced in the body has, however, been fully worked out, and it is possible to prepare identical substances by chemical synthesis. Thyroxine and adrenalin are good examples of this. While insulin brings about the storage of sugar, thyroxine causes rapid disappearance of stored sugar, by increasing the rate at which the chemical changes involving its destruction occur. So little as 5-10 mgm. of thyroxine will increase this by as much as 45 per cent. Its chemical constitution was recently discovered by Dr. C. R. Harington, a young British chemist, who worked out a method for its synthesis and gave this knowledge freely to the world. Its manufacture has been set up by British firms. It involves fifteen separate stages, and is perhaps the most complex synthesis ever applied commercially. Adrenalin is secreted by the suprarenal gland, situated near the kidneys. Minute amounts of adrenalin exert a powerful physiological effect.

Closely allied to it is ephedrine—an alkaloid which occurs naturally in the Chinese plant Ma-huang, from which it is commercially produced. Ephedrine has a valuable use, because its administration powerfully relieves the distressing effects of asthma. The knowledge previously gained in regard to adrenalin has made it a comparatively easy task now to manufacture ephedrine synthetically, although the product so obtained has a weaker action than the natural alkaloid.

As a last example of recent achievement, let me refer to the discoveries in regard to vitamin D. This can now be artificially made in an extraordinarily powerful form by the action of ultra-violet light on ergosterol—a substance derived from yeast. The manufacture of this vitamin D was set up in this country very soon after the discovery was announced by Rosenheim and Webster.

The substance has a most powerful action; indeed, a daily dose of 0.001 mgm. suffices to produce complete healing of rickets in rats weighing 90-100 grams. Thus, one part appears to promote the deposition of very many thousand times its weight of calcium phosphate. In its complete absence healthy life cannot be sustained. The manufacture calls for the most careful scientific control of the process, and the product can only be tested by its effect on growing animals.

There are many reasons why the manufacture of these fine chemicals is to be regarded as an industry of exceptional importance to us in Great Britain. It affords an outlet for the particular abilities of our race in scientific activity, and it makes for independence in applied science, without which our nation and empire cannot develop. Is it not, moreover, a condition of our existence that the industries suited to the race should be developed? Domination lies more with those who use knowledge than with those who discover it—most of all with those who both discover and apply new knowledge. During the period 1860-80 Great Britain led the way in the manufacture of medicinal chemicals; but whereas in regard to heavy chemicals we have continued to lead, there came a period during the last twenty years of the nineteenth century when the lead in the manufacture of the newly introduced medicinal chemicals and dyes was not maintained, while new departures in these fields were continually being made in Germany. It was fortunate that English manufacturers had already set out to recover this lead before 1914, when, through the necessities of war, a great strain was thrown upon their productive capacity. For a time it seemed that, owing to the higher rates of wages in this country, compared with those in Germany, success in this would be impossible.

FUTURE DEVELOPMENTS

There remain some drugs which are not yet manufactured, as, for example, gualacol, phenacetin and veronal, though I am told that a well-known company intends soon to make the first of these. These exceptions are chiefly substances derived from intermediates employed in the making of dyestuffs. The fact that substances of the type that I have mentioned are not yet manufactured implies that the organisation of chemical industry in this country, although it has made rapid strides, has not yet been completed. The advantages of rationalisation in the fine chemical industry, by interconnecting and rearranging the various branches in order to secure efficiency and the best development, at once become apparent when it is realised that most of the substances manufactured require specialised plant and accumulated experience. At the same time the market is easily overstocked.

Future progress lies in extending the use of science in our industry, in the first place by promoting research in industrial laboratories in the closest possible relationship with that carried out in academic institutions and that under the ægis of the Medical Research Council, and, secondly, by finding employment for greater numbers of scientifically trained staff and workers, to whom is given responsibility and a living interest in the work they are performing. In this matter of trained personnel there has fortunately been a great increase during the past decade in the number of men receiving University training in chemical science. It is of great importance also that as an outcome of the country's educational policy many youngsters on leaving secondary schools in the present day have had sufficient grounding in elementary science for those that have an aptitude for it to be discovered. In this way a rank and file of able workers is being produced, with many new opportunities opening out for them. It is an old and accepted tradition that the British workman is the best in the world. The truth of this is only to be maintained by finding proper outlets for these scientific faculties, which are unquestionably characteristic of our race. The recognition of this, and the fact that as a nation we must live on productive industry, are strong reasons for developing and encouraging the manufacture of synthetic drugs.

Votes of thanks to the chairman and the speakers, proposed by Sir Richard Gregory, and to the Lord Mayor for the use of the Mansion House, proposed by the chairman, concluded the proceedings.

Trade Mark Applications

The figures in parentheses refer to the classes in which the marks are grouped. A list of classes and particulars as to registration are given in "The Chemist and Druggist Diary," 1929, p. 333.

(From "The Trade Marks Journal," April 3, 1929.)

- Picture of griffin; for scientific instruments, etc. (8). By Griffin & Tatlock, Ltd., Kemble Street, Kingsway, London, W.C.2. 498,379. (Associated.)
- "SOLO"; for surgical instruments, etc. (11). By The Peromia Co., Ltd., 53 Stoney Street, Nottingham. 497,463.
- "SAVAGE"; for massage apparatus (11). By Bedington Liddiatt & Co., Ltd., 4-7 Chiswell Street, London, E.C.1. 498,542.
- "VALEO"; for toilet paper (39). By The Drayton Paper Works, Ltd., Sulivan Road, South Park, Fulham, London, S.W.6. 499,652.
- "WEMTEX"; for all goods (42). By The United Malting Co., 73 Aston Street, Wem, Shropshire. 497,782.
- "THORPIN"; for a preparation for removing stains from fabrics (47). By Thawpit, Ltd., 38 Gordon Square, London, W.C.1. 498,755.
- "AGNESIA"; for perfumery, etc. (48). By Medical Hall, Ltd., 23 Battery Road, Singapore, Straits Settlements. 485,469.
- "DHAUSSY"; for perfumes, toilet powder and perfumed soap (48). By Les Parfums de Dhaussy, 6 Passage des Petites-Ecuries, Paris. 490,456.
- "DENS-A-SAN"; for a liquid preparation for the mouth, teeth and gums (48). By H. J. Wade & Co., Ltd., 37 Railway Road, Blackburn. 498,474.
- "PAMELA"; for powder puffs and pads (48). By Faire Bros. & Co., Ltd., 2 Southampton Street, Leicester. 497,787.

(From "The Trade Marks Journal," April 10, 1929.)

- "PRINTON"; for all goods (1). By I.G. Farbenindustrie A.G., Mainzerlandstrasse 28, Frankfurt-on-Main, Germany. 497,137.
- "HANDY" on circular device incorporating brush ("Handy" disclaimed); for chemicals (1). By The Walpamar Co., Ltd., 35 Rathbone Place, Oxford Street, London, W.1. 498,116. (Associated.)
- "FLORANOL"; for chemicals for use in perfumery (1). By Bayer Products, Ltd., 31 Basinghall Street, London, E.C.2. 500,004.
- "SPUMAN"; for chemicals (2), medicinal chemicals (3) and for perfumery, etc. (48). By A. Karreh, Luitpold-Werk Chemisch-Pharmazeutische Fabrik, Zielstattstrasse 9, München 25, Bavaria. 496,934/935/936. (Associated.)
- "CUPRYL"; for a liquid fungicide, etc. (2). By W. J. Craven & Co., Ltd., 48 Port Street, Evesham. 499,370.
- "ALL-A-FIRE"; "CAPERN'S 'ALL-A-FIRE' TONIC FOOD FOR PIGEONS" on device including two pigeons (device of pigeons disclaimed); for pigeon food (2) and (42). By H. W. Jenkins, Lewins Mead, Bristol. 499(734/735/736/737). (Associated.)
- "RAPDETH"; for moth killer and insecticide (2). By A. L. Burlin, 297 Seven Sisters Road, London, N.4. 500,042.
- "IXONA"; for medicinal chemicals (3). By Mason's Ltd., 3 Pancras Lane, Queen Street, London, E.C.4. 497,457. (Associated.)
- "STRYPHON"; for wound-dressing gauze, etc. (3). By Pharmazeutische Industrie A.G., Kolblgasse 10, Vienna III, Austria. 498,188.
- "ULTRAY"; for medicinal chemicals (3). By The Dubarry Perfumery Co., Ltd., Hove Park Villas, Hove. 498,532
- "BACTÉ - DYSENTERI - PHAGE"; "BACTÉ-INTESI-PHAGE"; "BACTÉ-RHINO-PHAGE"; and "BACTÉ-PYO-PHAGE"; for medicines (3). By Le Laboratoire du Bactériophage, 52 Rue de Bourgogne, Paris. 499,132/133/134/135. (Associated.)
- "HEALSACURAS"; for medicines for catarrh, etc. (3). By N. Hoskins, 18 Nightingale Lane, London, S.W.12. 499,438.
- "AFOS"; for cough pastilles (3). By The Anglo-French Confectionery Co., Ltd., Crystal Works, Ashdon Road, Harlesden, N.W.10. 499,844. (Associated.)
- "THE DAVIES BRONOLIVE FOR BRONCHITIS," with picture of two men ("The Davies" disclaimed); for bronchitis medicine (3). By B. Davies, 44 Pembroke Road, Canton, Cardiff. 499,980.
- "AMRUTANJAN" and "BOMBAY" in cross form on circle ("Bombay" disclaimed); for medicines (3). By K. N. Rao, 7 Thambu Chetty Street, Madras, India. 500,286.
- "GLYKOSMA"; for essential oils for use in perfumes (4), and for toilet articles (48). By Schimmel & Co. A.G., Schimmelstrasse 1, Miltitz, near Leipzig, Germany. 498,039/040. (Associated.)

London Chamber of Commerce

THE annual report of the Chamber, which was submitted at the annual meeting at Skinners' Hall, on April 24, deals with the work of the various sections during the year. Among the matters dealt with by the Perfumery Manufacturers' Section was the question of facilities for manufacturing in bond for the home trade, from which it appears that the Board of Customs and Excise stated that the proposals of the section for overcoming difficulties to which the Customs authorities had directed attention were also submitted to the Ministers concerned. While the suggestion of a surtax might go some way to meeting the objections of the trade, there were wider considerations of general policy, which made it impossible to grant the request of the British perfumery industry.

TRADE MARKS

(A) *Applications for Registration.*—A number of applications for registration in Class 48 (Perfumery) of words and trade marks were dealt with by the section, and in the interests of members, action was taken with satisfactory results in the following instances:—"Mirosa," "Lily," "Bois des Iles," and "Jazmin del Pais." The decision of the Registrar has yet to be given in the application for the registration of the word "Jasyn."

(B) *Trade Marks in China.*—The situation in China regarding trade marks registration was carefully watched, and members were advised from time to time of the many changes which took place. The latest information received by the Chamber is that the Nationalist Commissioner for Foreign Affairs has advised His Majesty's Minister in China that the Nationalist Ministers of Commerce and Labour propose to amend the law relating to trade marks, and to reduce the fees payable upon re-examination of marks previously registered at Peking. Further, the time limit for re-registration of trade marks already registered at Peking Bureau at the Registration Bureau at Nanking has been extended until April 18, 1929.

MERCHANDISE MARKS ACT, 1926

An application made by the British Glass Manufacturers for the compulsory marking, with an indication of origin, of imported bottles of all descriptions, was viewed with serious concern. The Section decided to oppose strenuously the application and to co-operate with other trades concerned in the opposition. Mr. Barrett and Mr. Gosnell were appointed to represent the interests of the British perfumery industry on the group committee. Details of the case of the perfumery industry against the application were being formulated at the close of the year.

Other matters dealt with by the section was the question of returns from wholesalers, etc., Polish import restrictions, Mexican regulations involving disclosure of formulas, sale of pharmaceutical specialities in Czechoslovakia, etc.

PROPRIETARY ARTICLES

Among the matters discussed by the Owners of Proprietary Articles Section was the duty on patent and proprietary medicines and medical preparations in India. Following the recommendation of the Indian Taxation Enquiry Committee, 1924-25, that a tax should be imposed on patent medicines, a report was received to the effect that the Government of India had ruled that this should be levied as a provincial tax. On receipt of this information it was decided that every endeavour should be made to resist the tax, and accordingly letters were addressed to the leading Chambers of Commerce in India urging the extreme value of these preparations to people, both European and native, living in remote districts where medical attention was not easily procurable; and pointing out that, although a similar tax might be levied in Great Britain without apparent objection on the part of the consumer, in India the imposition of such a tax would naturally increase the price to the consumer and would undoubtedly have a detrimental effect on sales owing to the inability or unwillingness of the Indian consumer to pay the increased prices.

From replies received it would appear that the matter is only receiving the attention of the Government of

Bombay at the present time, as in February last a Committee was appointed by that Government to examine the question, particularly as to the desirability and practicability of levying the tax and the ways and means of collecting it. As a result of the Committee's deliberations it was understood that it had been decided to obtain a full list of patent medicines which are taxable in the United Kingdom, and to make inquiries as to the value of the imports of those articles into Bombay Province over a period of six months.

The Bombay Chamber stated that they were unaware that central legislation was contemplated, but expressed the opinion that the question was surrounded with difficulties, and that any but central legislation, or at least the unanimous adoption of relative legislation by all provinces, would prove impracticable.

Other replies were to the effect that no legislation had been contemplated in the various provinces up to the time of writing, but that when the subject was introduced the section would receive the sympathetic consideration of the various Chambers of Commerce.

Festivities

Progress Club Dinner

MEMBERS of the Progress Club of Boots Pure Drug Co., Ltd., held their annual dinner at the Victoria Station Hotel, Nottingham, on April 19. Mr. J. E. Greenwood presided, and the toast of "The Company" was given by Mr. C. E. Hopson, who touched on the new works in course of erection. Mr. J. E. Greenwood, replying to the toast, said that they were true to their watchword "Progress." Mr. K. Wagg, Mr. H. B. Holthouse, and Mr. W. Dodds were among the other speakers. Miss A. Bowles, Miss D. Hunt, Mr. J. F. Carter, Mr. J. Ellis, Mr. E. H. England, and Mr. R. Hadrill contributed to the harmony of the evening, and Mr. E. V. Bradson was accompanist.

Exeter Dinner

THE annual dinner of the Exeter and District Branch of the Pharmaceutical Society was held at the Royal Clarence Hotel, Exeter, on April 17. Mr. Murray T. Foster (president) occupied the chair, and the company included members and friends from Torquay, Dartmouth, Cullompton, Plymouth, Barnstaple and Exmouth. During the evening a congratulatory message was dispatched to Mr. and Mrs. J. Hinton Lake, who recently celebrated their diamond wedding. Mr. B. L. Thomas, clerk to Devon insurance committee, submitting "The Pharmaceutical Society of Great Britain and Kindred Associations," said that he looked upon the Society as a necessary evolution of civilisation. When he considered the difficulties of their profession, and the narrowness of the margin between safety and danger, he realised that they were wonderful people. Mr. E. Saville Peck, responding, referred to the progress of the Society. Ten years ago a man needed no special training; he simply presented himself for examination, and his success depended largely upon luck. There were now twenty-five schools approved by the Society, at which students could take the necessary nine months' course of instruction. The more scholarships there were, the better it would be for future generations. He wished to thank the pharmacists of Devon and Cornwall for the scholarship they had provided. There had been argument as to whether pharmacy was a trade or a profession. Whichever it was, he thought the men who had passed the Society's examinations deserved the prestige of professional men. The speaker concluded with a reference to the work of the science committee of the Society, and expressed the hope that Mr. Rowsell would enter the House of Commons after the forthcoming general election. Mr. J. H. Smith submitted "Pharmaceutical Students," remarking that the type of student to-day was very much superior to that in the past. Mr. G. Scantlebury responded. "The Visitors," proposed by Mr. Philip F. Rowsell, was responded to by Mr. T. B. Harvey and Mr. A. H. Ware. The chairman's health was toasted at the call of Mr. I. R. Phillips. Mr. F. Southenden and Mr. A. C. Milton, the branch secretaries, were responsible for arranging the function.

Insurance Act Dispensing

Record of matters concerning Chemists' interests in the
National Health Insurance Acts

Local Reports

ENGLAND AND WALES

Derby.—At a meeting of the Insurance Committee recently it was reported that the number of prescriptions dispensed in the borough during the three months ended December 31, 1928, was 51,003, giving a frequency of 1.02 per insured person. The average ingredient cost was 4.2d., the average dispensing fee 4.4d.

Herts.—At a meeting of the Insurance Committee on April 8, four cases of test dispensing were considered. In one the analysis made by the Committee's analyst and the analysis by the county analyst of Devon on behalf of the Retail Pharmacists' Union showed material difference. It was decided to take no further action, and in the other three cases two fines of £1 and one of £2 were approved. In two cases a 31.8-per-cent. excess of ac. sulph. dil. was present, and in the other there was a deficiency of 25 per cent. of sodii bicarb. A fine of £1 was recommended in respect of a bandage which did not conform to the requirements of the British Pharmaceutical Codex. The Subcommittee, in their finding, stated that they were convinced that the chemist obtained the bandage in question from one of the best manufacturing firms, and that he acted in good faith, but they advised that he must be held responsible to the Committee for the goods supplied to him. Fines of £1 and £2, respectively, were recommended by the Committee to be imposed on two chemists alleged to have supplied drugs which were found on analysis to be not of the standard required. Sir Charles Longmore (clerk to the Committee) stated that it was suggested that, as in tests made under the Sale of Food and Drugs Acts, the substance should be divided into three parts instead of only two as at present, so that the Committee could have a further analyses if necessary.

Middlesex.—At a meeting of the Pharmaceutical Committee, it was intimated that it had been arranged to modify the formula for mist. tussis, Msx., by replacing the diamorphine hydrochloride with syrupus codeine phosphatis, B.P. The modified formula, which will come into use on May 1, is as follows:—Syr. codein. phos., m. 30; syr. tolu. m. 30; liq. cocci, m. $\frac{1}{2}$; aq. ad. 3ss. An official notification will be sent to doctors and chemists on the Middlesex panel. A notice has been received to the effect that Fehling's solution can now be ordered for self-use by patients who are insured persons, and it was decided to inform the authorities that it was assumed that Benedict's modification of Fehling's solution would be allowed as well as the original form. The supervisor's report included the following particulars relative to December 1928 and January 1929 respectively:—Number of prescriptions, 172,257 and 234,454; ingredient cost, £2,914 3s. 9d. and £3,783 9s. 1d.; average ingredient cost, 4.1d. and 3.9d.; dispensing fees, £3,156 3s. 3d. and £4,357 4s. 8d.; average dispensing fee, 4.4d. and 4.4d. The following total averages for three years were given:—

	1926	1927	1928
No. of prescriptions	1,729,754	1,949,162	1,932,382
Cost of ingredients	£30,339 9s. 1d.	£32,854 3s. 7d.	£31,752 10s. 8d.
Dispensing fees	£31,969 1s. 7d.	£36,091 16s. 11d.	£35,448 14s. 4d.
Average ingredients	4.2d.	4.1d.	3.9d.
Average fees	4.51d.	4.4d.	4.4d.
Insured persons	444,406	464,822	487,644
Frequency	3.9	4.2	4.0
AV. cost per person	33.7d.	35.6d.	33.1d.

Ministry of Pensions (London Region) prescriptions for November and December, 1928, were 573 and 1,675 respectively, and cost £26 17s. 2d. and £77 1s. 11d. The total number for 1928 was 16,502, the cost being £804 16s. 8d. Articles disallowed during December 1928 and January 1929 numbered thirty-six, including eleven brushes, Thermogene, capsicum wool, ear-droppers, eye-pads, rubber finger stalls, Bemax, Vitalia, Robeiline and Oatline cream. For the fourth quarter of 1928 there were 733 prescriptions for insulin at a cost of £340 15s. 10d., and 358 for serums and vaccines (cost £121 12s. 1d.). Nine hypodermic syringes and eighty needles were supplied at a cost of £1 7s. and £4 4s. 11d.

Suffolk.—At the quarterly meeting of West Suffolk Insurance Committee, at Bury St. Edmunds, on April 8, the clerk reported that representation had been made to the Minister of Health for provision to be made in the drug testing scheme for division of test mixtures into three parts instead of two, in order that in those cases in which there was a serious difference incapable of explanation in the reports of the committee's analyst and the chemist's analyst, the third portion might be referred to another analyst. The Ministry of Health had replied:—"I am to point out that in many cases a third part of a normal sample would not provide sufficient material for analytical purposes, and if, as might happen, the analysis of a third part of the sample differed from the analyses of the other two parts, it would appear that the object which the committee have in view would be attained. In these circumstances, and as the experience of the working of the scheme hitherto has shown that the present practice of dividing samples into two parts has worked very satisfactorily, the Minister does not propose to take any action in the matter at the present time."

Worcester.—At a meeting of the Insurance Committee recently it was reported that the committee's share of the £6,191,750 in the Practitioners' Fund was £8,545. Of this, £8,158 had already been received, leaving a credit balance for 1929 of £407. It was also reported that the average cost per prescription for the area during January was 84.5 per cent. for dispensing fees and 3.5 per cent. for ingredients. The average cost for Worcester was 8.5 per cent., the highest on the list, with Leicester's, which was also 8.5 per cent. Herefordshire was 8.3 per cent., Burton, the lowest, 7.3 per cent., and Worcestershire 7.9. A Burton representative had attributed the low cost of medicine in Burton to the extraordinary good health of the people. The people were always employed, well paid and well treated. The chemists' shops closed at 7 o'clock. As they had often pointed out at these meetings, the city of Worcester received more money out of the drug fund than any other in the area.

SCOTLAND

Ayr.—A meeting of the County Insurance Committee was held at Kilmarnock on April 13. It was stated that the number of insured persons was 74,443 in 1924, and 73,415 at the present. The chemists under agreement with the Committee have increased in number. In 1924 there were 82, and at the present time there were 92. The amount paid to doctors in 1924 was £31,101 10s., and in 1928 £32,103 5s. Chemists' accounts in 1924 were £6,781 1s. 8d., and in 1928 £5,153 10s., a decrease of £1,627 11s. 8d. The number of prescriptions has also decreased. In 1924 there were 113,575, and in 1928 90,005, a decrease of 23,570. The average cost per person also is less. In 1924 it was 1s. 11.56d., and in 1928 1s. 5.66d. There is no doubt that the reports on prescribing had the effect of showing doctors what could be done in the way of efficient but less expensive prescribing.

Kirkcaldy.—At a meeting of the Kirkcaldy Burgh Insurance Committee recently, it was stated the return of insured persons on the register as at January 1, 1929, showed a total of 16,692. The following credits were intimated for the year:—Practitioners' fund, £7,182, against £7,152 in 1927; drug fund, £1,226, against £1,221; and administration fund, £474, against £473.

Motherwell and Wishaw.—A statement regarding the testing of drugs and appliances supplied to insured persons was made at the quarterly meeting of the Insurance Committee, held recently. The chairman stated that these tests revealed a high standard of efficiency amongst the panel chemists in Motherwell and Wishaw, and that it was most gratifying, not only to the Insurance Committee, but to insured persons generally, to know that the drugs and appliances supplied by panel chemists in this area to insured persons were of such excellent quality. It was stated that if this fact was made known amongst the general public it would do much to counteract the unfair criticisms which had been made in some quarters that the drugs and appliances supplied to insured persons were of an inferior quality to those supplied to private patients.

Trade Report

The prices given in this section are those obtained by importers or manufacturers for bulk quantities or original packages. To these prices various charges have to be added, whereby values are in many instances greatly augmented before wholesale dealers receive the goods into stock, after which much expense may be incurred in garbling, packing, etc. Qualities of chemicals, drugs, essential and fixed oils, and many other commodities vary greatly, and higher prices than those here quoted are charged for selected qualities of natural products even in bulk quantities.

42 Cannon Street, E.C.4, April 25

BUSINESS in pharmaceutical chemicals is reported as being quite satisfactory and again a number of advances have taken place, chief among which is aspirin, by both British and Continental makers. Amidopyrin and barbitone are firmer; salol is 6d. per lb. higher. Phenazone and phenacetin remain firm, the market being of opinion that prices will advance further. There is a fair inquiry for crude drugs, but orders are few. Cardamoms are very firm, and at auction last week full to higher rates were paid, round Mangalore, in particular, being 6d. per lb. higher. Balsam tolu is still very scarce, with genuine c.i.f. offers difficult to obtain. Glycerin may advance from its present unremunerative level; some of the lower German prices have been withdrawn. Menthol is steadier and saffron cheaper. Among essential oils the price changes are adequate indication of the weak state of business, Japanese dementholised peppermint being the only oil to show a firmer tendency. Rosemary, spike, lavender and anise (for shipment) are all easier. Bergamot, lemon, mandarin, spearmint and Ceylon citronella are each available at lower figures. In the industrial chemicals group a moderate volume of business is reported, with few changes. Acetone remains firm, while potassium products have been in more frequent request. Cream of tartar is steady but in slow demand. Formaldehyde is unsettled and tending easier. Lead acetate is cheaper, following the metal. Among coal-tar products, carbolic acid crystals are firmer. Among the fixed oils generally quiet conditions continue, with a few weak items. These include palm, ground nut, soya and linseed in forward positions. Wood oil is lower and turpentine has considerably improved.

Higher	Firmer	Easier	Lower
Amidopyrin	Barbitone	Anise oil (c.i.f.)	Bergamot oil
Aspirin	Carbolic acid	Cocoa butter	Citronella oil
Calumba	crystals	Euonymus	(Cey.)
Cardamoms	Peppermint oil	Formaldehyde	Lead acetate
Orris (Flor.)	(Jp.)	Ground nut oil	Lemon oil
Salol	Shellac	Lavender oil	Mandarin oil
Turpentine		Linseed oil	Soya oil
		Palm kernel oil	Spearmint oil
		Rosemary oil	Wood oil
		Spike oil	Saffron

Cablegram

BERGEN, April 24.—The catch of cod since the opening of the season amounts to 64,325,000, against 51,584,000 at the corresponding period of last year, and the yield of steam-refined cod-liver oil amounts to 80,646 hectolitres, against 42,409 hectolitres at the same period of last year. The fishing at Lofoten has now finished. Market for finest new (1929) Lofoten non-freezing steam-refined oil is very firm at 110s. per barrel c.i.f.

Crude Drugs, etc.

AGAR AGAR is quiet. Kobe No. 1 to arrive is quoted at 3s. 11d. c.i.f., and 4s. 1½d. spot; No. 2 is 3s. 8d. c.i.f.; Yokohama No. 1 is 3s. 6d. c.i.f.

ALOES.—Curacao is quoted to arrive at 115s. per cwt. c.i.f. for t.q. quality; on the spot prices range from 120s. to 130s. for fair to good liver; coarse has been sold at 116s.

ANTIMONY.—Only little interest was shown for Chinese regulus, but holders on the spot maintain their price at about £38, delivered warehouse. Terms for shipment were well maintained at £33 10s. to £34 c.i.f. English refined varies from £55 down to £50 per ton, according to brand. Chinese crude on the spot is quoted at £32 10s., and Chinese white oxide ranges from about £34 upward.

BALSAMS.—Small spot sales of *Tolu* have been made at 4s. 9d. per lb. Genuine offers on c.i.f. terms are difficult to obtain. *Peru* of genuine B.P. quality is scarce with sellers at 7s. 6d. per lb. Balsam *Canada* is 5s. 3d. and B.P. *Copaiba* 1s. 7d. per lb.

CADMIUM.—There has been a quietly hardening market, due chiefly to a regular good demand, and despite a little

more competition between Australian and Canadian agents current rates are a little better, ranging from 4s. 2d. to 4s. 3d. per lb. on the spot. The supply of Canadian cadmium is steadily improving with the extension of the output at the Trail in British Columbia.

CALUMBA is dearer at 40s. per cwt. for fair natural sorts and at 60s. for washed.

CARDAMOMS.—At auction on April 13 148 cases offered and 118 sold at full up to occasionally higher rates, particularly round Mangalore which were 6d. per lb. dearer compared with the previous sale. The following prices were paid: Ceylon-Mysore, good bold pale 7s. 4d. to 7s. 9d., medium 4s. 9d., small and medium 3s. 9d. to 4s. 1d., small 3s. 3d. to 3s. 4d., medium splits 4s. 6d., bold brownish 4s. 9d., medium 3s. 11d., small 3s. 5d., bold brownish splits 5s. 7d. to 5s. 9d., medium splits 3s. 11d. to 4s. 6d., small 3s. to 3s. 6d., unclipped 3s. 3d. to 3s. 4d.; Mangalore, good bold round 5s. 6d. to 5s. 7d., medium 3s. 7d., bold splits 3s. 7d., fair long 4s. 8d.; 13 cases green Alleppy were bought in at 4s. per lb. Privately, to arrive sales of green Alleppy and Malabar have been made at 3s. 10d. c.i.f.; seed for April-May shipment has been sold at 5s. 4d. c.i.f., and on the spot business has been done at 5s. 9d.

CASOARA SAGRADA for prompt shipment is quoted at 55s. per cwt. c.i.f., and new crop for September shipment at 52s. 6d. c.i.f.; on the spot sellers quote 57s. 6d. per cwt.

CLOVES.—Zanzibar are quiet, with spot sellers at 1s. 5d. per lb. To arrive, July-August shipment is quoted at 1s. 1d. and August-October shipment has been sold at from 11½d. to 11¾d. c.i.f. The landings of Zanzibar in London during the week ending April 20 were 400 and the deliveries 50, leaving a stock of 1,960, against 13,502 in 1928 and 12,122 in 1927. The landings to date have been 3,451, against 8,331 in 1928, and the deliveries to date 3,990, against 4,358 in 1928. The landings of Madagascar during the week ending April 20 were nil and the deliveries 88, leaving a stock of 1,868 bales.

COCOA BUTLER is easier at 1s. 3¾d. per lb. for CFR and 1s. 3½d. for prime English, in not less than one-ton lots.

COD LIVER OIL continues firm with a reluctance on the part of makers to accept current rates; the feeling in Norway is that the market is likely to advance, as the fishing results during the past few weeks have not been promising compared with the opening weeks of the season. Agents' prices for finest new (1929) Lofoten steam-refined non-freezing oil range from 104s. to 110s. c.i.f.

BERGEN, April 17.—The fishing is still going on under the most favourable weather conditions, and owing to the excellent result price for cod-liver oil has further declined. Market is quiet, as buyers are holding back.

CORNURANGO BARK is offered at 6d. per lb. on the spot.

CORN PRODUCTS, ETC.—Guaranteed water-white American glucose (corn syrup) is 22s. 6d. per cwt. for March-April delivery, ex store (London). Dutch maize starch powder (cornflour) is 16s. 3d. per cwt. on the spot; American 16s. 9d. per cwt., ex store, London, for March-June delivery. Pearl starch is 16s. 3d. per cwt., ex store, London, for March-June delivery. Dutch maize starch crystals is 21s. on the spot, and American is 19s. 6d., ex store, London, for March-June delivery. Dutch dextrin is quoted at 22s. to 26s. per cwt. on the spot, as to quality. American canary for March-June delivery is 19s. 4½d., and white for March-June delivery 19s. 1½d., ex store London. Dutch farina is quoted at 13s. 6d. per cwt. on the spot, and for shipment 12s. 1½d. per cwt. f.o.b. is wanted.

EUONYMUS BARK is easier at 2s. 3d. per lb. c.i.f., and on the spot 2s. 6d. is quoted.

GINGER.—West African is steady with sales at 52s. per cwt. on the spot, and to arrive 48s. 6d. c.i.f. London is quoted.

GLYCERIN.—The official price of British chemically pure s.g. 1.260 remains at £55 per ton naked, in five-ton lots, in ten-cwt. drums. Foreign is quoted at £51 for B.P. quality. Prices have advanced in Germany, and it would not be surprising if an advance was made in the British prices.

GUM ACACIA remains firm with spot sales of Kordofan cleaned at 67s. 6d. per cwt., and to arrive 67s. 6d. c.i.f. is also quoted.

IPECACUANHA.—The "Highland Chieftain" from Monte Video has brought 18 packages.

MENTHOL is steady at from 20s. 6d. to 21s. per lb. for Kobayashi-Suzuki on the spot, and for April-June shipment 20s. 3d. c.i.f. is quoted.

MERCURY.—There is no new feature and holders adhere to their terms for good-sized lots at £22 2s. 6d. and small parcels at £22 5s. per bottle, less the usual discount on the spot. The American market is rather quiet, but the New York quotation is \$122½ to \$123, duty paid. A few hundred bottles were lately placed in the Far Eastern market. The home trade demand is still strictly hand-to-mouth, due to the high price, and hopes of some reduction eventually,

which, however, depends on the Italo-Spanish Combine. Imports continue small, but it is believed that quite a fair stock is still available at this end. Production has probably made good progress, although it is under restriction.

OPIMUM.—The following report has been received from Turkey:—

CONSTANTINOPLE, April 15.—Sales during the past fortnight have amounted to 54 cases druggists' at £T25 to £T31 per oke, 6 "softs" at £T28 to £T35, and 1 Malatia at £T27 per oke. Arrivals have been 1,594 druggists', 385 "softs," and 125 Malatia, making a total of 2,104, against 2,090 over the same period last year. The stocks are now 689 druggists', 170 "softs," and 92 Malatia, a total of 951, compared with 924 cases on the same date a year ago. Speculation was active for a few days, but now shows signs of diminishing. The weather has improved after some good rains, and the spring sowings are now in full swing. The general idea is that between 30 and 40 per cent. of the winter sowings have been totally destroyed.

ORRIS.—Florentine remains scarce and dear, with good sorts offering at about 135s. per cwt. c.i.f.

Whereas the quantity of orris exported from Italy to the United States through Leghorn decreased from 604,000 lb. in 1927 to 516,600 lb. in 1928, the value increased from \$43,115 to \$47,771.

PEPPER has been quiet and easier. Fair black Singapore is 1s. 4½d. per lb. on the spot, and May-July shipment is 2½d. c.i.f. Lampong is 1s. 5d. spot. To arrive, sales include Maroh-May at 1s. 3½d., May-July at 1s. 3d. to 1s. 2½d. to 1s. 2½d., and August-October at 1s. 2½d. to 1s. 2½d. to 1s. 1½d. c.i.f. Tellicherry is 1s. 5½d. spot and January-March has been sold at 148s. to 147s. c.i.f. Alleppy is 1s. 5d. spot and 146s. c.i.f. White Muntok is 2s. 2½d. spot; sales to arrive include Maroh-May shipment at 2s. 1½d., May-July at 2s. 1½d. to 2s. 1d. to 2s. 0½d., and August-October at 1s. 11d. to 1s. 10½d. c.i.f.

PIMENTO.—Spot sales have been made at 1s. 3d. per lb. To arrive, March-April shipment is 125s., and August-October shipment 110s. c.i.f.

RUBBER is a fraction better on the week, spot at the close being done at 10½d. At one time spot fell to 9½d. per lb., but later recovered consequent to fairly heavy spot buying. Whilst the near positions have been weak, the forward positions have kept fairly steady, with a general support at any decline. The October-December position has been well supported, and heavy buying has taken place. It is generally anticipated that a further recovery may be expected in the course of the next few weeks. Arrivals last week totalled 1,639 tons, whilst deliveries were 1,582 tons, with a slight increase of 57 tons in the stocks. The London stock now stands at 30,503 tons against 58,034 tons at the corresponding period last year. Quotations (Wednesday, 5 p.m.): No. 1 standard ribbed smoked sheet, spot and May 10½d., June, 10½d., July-September 10½d., October-December 10½d. per lb.

SAFFRON is easier on account of the fall in Spanish exchange rates, and quotations are now 45s. to 48s. per lb. according to quality. This represents a decline of about 1s. 6d. per lb. on each grade.

SEEDS.—The market remains very quiet, with prices steady. **ANISE.**—Spanish is 62s. 6d. and Russian 26s. 6d. per cwt. spot. **CANARY** is still firm on the spot. Mazagan is offering at 25s. 6d. spot and 25s. 6d. c.i.f. is now being quoted for forward shipment. Saffi is still 25s. 6d. spot. **CARAWAY.**—Dutch still remains firm at 41s. spot. For prompt shipment 39s. 3d. c.i.f. is quoted: May-June shipment 39s. 9d., and new crop for August-September at 40s. 6d. c.i.f. It is estimated that the new Dutch crop will not be over 80,000 bags. **CUMIN.**—Sellers of Maltese are still holding out for 55s. spot; Morocco is 47s. 6d. to 48s. 6d. spot according to quality. **CORIANDER.**—Morocco now remains at 14s. spot, and for forward shipment sellers would cable 12s. c.i.f. **FENUGREEK** has sellers now at 19s. spot, and that price is quoted c.i.f. for forward shipment. **LINSEED.**—Mazagan remains firm at 22s. spot. **MUSTARD.**—English is 27s. to 31s. on spot according to quality. **FENNEL.**—Indian is 68s. spot and new crop is now quoted at 62s. c.i.f. **POPPY.**—The Dutch crop has been largely affected by frost; prompt shipment is quoted at 35s. 6d.; May-June shipment at 35s. 9d., and new crop for September-October shipment at 37s. 6d. c.i.f. **SENEGA** remains unchanged at 5s. 6d. per lb. on the spot.

SHELLAC is firmer, usual standard TN orange quality offering at 190s. per cwt., fine orange 210s. to 300s., pure button 230s., and AC eakey 202s. 6d. To arrive, sellers of TN quote April-May and May-June shipment at 185s. c.i.f. Sales for delivery include TN for May at 185s., August at 191s. 6d. to 190s., and October at 190s. 6d. to 193s. 6d. to 192s. 6d.

SQUILL.—Fair to good white is scarce on the spot at from 50s. to 55s. per cwt., and for new crop July-August shipment 27s. 6d. c.i.f. is quoted.

Essential Oils

BUSINESS has been almost at a standstill, and a number of reductions in prices have resulted, the most sensational of these being the unexpected decline in lemon. In the case of Spanish oils the easier tone is due to the continued sliding of currency rates, which is a reflection on the unsettled political condition of the country. Japanese dementholised peppermint is the only oil showing a firmer tone, and there have not been any advances. Rosemary, spike, anise for shipment, and lavender are easier. Bergamot, lemon, mandarin, Ceylon citronella and spearmint are all lower. The futuro position of bergamot and the proposal dealt with below is of vital interest to consumers.

ANISE (STAR).—"Red Ship" is firm on the spot with sellers at 2s. 9d. per lb. in leads, 2s. 7d. in tins and 2s. 5½d. in drums. The latest quotations for shipment have an easier tone, a parcel of tins being offered at 2s. 6½d. per lb. c.i.f.

BERGAMOT is lower at 19s. 6d. per lb. c.i.f. and 19s. 9d. to 20s. per lb. on the spot. It is rumoured that an interesting proposal is on foot in Calabria with regard to the futuro of this oil. Strong political support has been found for a suggestion to place production under the control of the Camera Agrumaria. All oil distilled would thus be passed over to a central depot from which the entire sales would be executed and prices would be controlled just as in the case of citric acid. If the project is carried further a complete monopoly should result as there is no other production centre to compete with the Italian.

CASSIA is dull and neglected. On a London analysis the forward quotation is 4s. 7½d. per lb. c.i.f. with spot supplies of 80-85 per cent., free from alcohol, offered at 5s. 3d. per lb. The value of oil on a Hong-kong analysis is 4s. 6d. per lb. c.i.f.

CEDARWOOD is firm on the spot at 1s. 2½d. per lb. for drums, and forward quotations are relatively dearer.

CITRONELLA.—Ceylon has declined to 1s. 8d. per lb. c.i.f., and 1s. 10d. would probably buy on the spot. Java is unchanged at 1s. 11d. on the spot and 1s. 10½d. per lb. c.i.f. to arrive.

LAVENDER has been in poor demand, and the value of 38-40 per cent. French oil has eased to 15s. per lb. on the spot.

LEMON is lower. The high level of prices recently reached brought about a certain inactivity which, with lack of consuming demand, has resulted in a decline. This should, however, be a temporary state of affairs, and at the present rates business should prove active. Offers from Sicily range from 15s. 6d. to 16s. per lb. c.i.f. for genuine hand-pressed, and the spot value is 16s. 6d. to 16s. 9d. per lb. Californian is also cheaper, the regular quality being quoted at 11s. 6d. per lb. on the spot in drums.

MANDARIN is quoted lower at 26s. 6d. per lb. on the spot in one direction.

ORANGE is maintained at last week's lower rates. Sicilian sweet is quoted 22s. per lb. on the spot and 21s. 6d. c.i.f. for shipment. Sicilian bitter is available at 21s. on the spot. Californian is quoted at 19s. 6d. per lb. on the spot, in cases. The predicated glut in the fruit market will, of course, not take effect this season and is merely a pointer for distant business.

The Empire Marketing Board have prepared a survey of the world's production of oranges, and a glut in the market for fruit is foreshadowed. The largest importer of oranges is the United Kingdom, which imported nearly 8,000,000 cwt. both in 1926 and 1927. Of this total Spain supplied 67 per cent., Palestine 17 per cent., South Africa 6 per cent., United States 6 per cent., Italy 1 per cent., Egypt 1 per cent., and British West Indies 1 per cent. Empire countries show the most striking increases in production, and the problem of disposing of the augmented supplies is engaging the attention of growers' organisations.

PEPPERMINT.—American natural tin oil is still neglected at 12s. 6d. to 13s. per lb. c.i.f. according to brand. The spot prices range between 12s. 9d. and 13s. 3d., as to seller and quantity. H.G.H. is worth 18s. 3d. per lb. on the spot. Japanese dementholised is firmer to arrive, though weak on the spot. Kobayashi-Suzuki is offered at 6s. 3d. per lb. on the spot in one direction, though 6s. 4½d. is asked by some holders. Shipment is quoted 6s. 4½d. c.i.f. for April-May, 6s. 6d. c.i.f. for May-June, and 6s. 4½d. for July-August (6s. 6d. having been paid for July-August). Outside brands are about 1½d. per lb. cheaper than these rates.

PETITGRAIN.—Paraguay is firm but unchanged at 7s. 8d. c.i.f. and 8s. per lb. on the spot.

ROSEMARY is a shade easier. Spanish being quoted 1s. 11d. to 2s. 2d. per lb., as to grade.

SPEARMINT has eased further to 16s. c.i.f., and supplies on the spot are now offered at 17s. 6d. per lb.

SPIKE.—Spanish has been shaded to 2s. 11d. per lb. on the spot for quantities.

VETIVER is unchanged at the reduced price of 19s. per lb. on the spot for Bourbon.

WORMSEED (CHENOPodium) is neglected at 9s. 3d. on the spot and 8s. per lb. c.i.f.

The following arrivals have taken place from the countries indicated during the period April 17 to April 23 (inclusive): Almond (U.S.) 3 cs., (Fr.) 20 cs.; amyris (U.S.), 7 cs.; anise (Ch.), 16 pkgs.; bergamot (It.), 25 cs.; camphor (U.S.); 2 dm., (Jp.) 10 dm.; cassia (Ch.), 35 cs.; cinnamon (Cey.) 1 cs. 2 dm.; citronella (Jv.) 10 dm., (Cey.) 7 dm., (Neth.) 2 dm.; clove (Madag.), 8 dm.; eucalyptus (Ger.) 1 dm., (Aust.) 25 cs.; gingergrass (Br. Ind.), 6 dm. 2 cs.; lavender (Fr.), 1 cs.; lemon (It.) 352 cs., (Ger.) 10 cs. 5 dm., (Fr.) 3 cs., (U.S.) 25 cs. 12 dm.; lemongrass (Br. Ind.), 6 dm.; lime (B.W.I.), 6 cs.; mandarin (It.), 3 cs.; nutmeg (U.S.) 1 cs.; orange (It.) 22 cs., (Sp.) 10 cs., (B.W.I.) 10 cs., (Jp.) 5 cs.; orris (Fr.), 2 cs.; palmarosa (Br. Ind.), 1 dm.; patchouli (U.S.), 10 cs.; peppermint (U.S.) 10 cs., (Jp.) 128 cs.; petitgrain (Fr.), 1 cs.; pimento (U.S.) 1 cs.; sandalwood (Aust.), 60 cs.; spearmint (U.S.), 3 cs.; wormseed (Aust.), 3 cs.; undscribed (It.), 3 cs.

Pharmaceutical Chemicals, etc.

A FEW further advances in prices are recorded this week. Aspirin shows a further good increase in prices. Salol has advanced by 6d. per lb. Barbitone is firming up and may go still higher. Other items are all very steady and business is reported as being quite satisfactory in all directions.

ACETANILIDE is unchanged on a quiet market: B.P. crystals and powder, 1s. 5d. to 1s. 6d. per lb., as to quantity.

AMIDOL is maintained at the recent advanced rates of 7s. 9d. to 8s. per lb.

AMIDOPYRIN is a firm market at last week's advanced rates: spot is about 8s. 6d. to 8s. 9d. per lb., as to quantity.

ASPIRIN.—There has been a further considerable advance in this market. Continental material is now quoted at 2s. 9d. for large quantities and up to 2s. 10d. for cwt. lots. British makers' prices have also advanced, and they now quote ten cwt. at 2s. 6d.; five cwt., 2s. 7d.; one cwt., 2s. 7½d., and less than one cwt., 2s. 8d. per lb.

BARBITONE is moving up, with spot now firm at 5s. 9d. to 6s. per lb.

BENZALDEHYDE (.03) is unchanged on a quiet market: quoted from 1s. 10d. to 2s. per lb., in carboys, as to quantity.

BENZOIC ACID (B.P.) is meeting with a steady business with prices unchanged: quantities, ex works, from 2s. 1d.; smaller lots, 2s. 2d. to 2s. 3d. per lb., ex store.

BROMIDES.—Business continues on a limited scale with prices showing no further change. Dealers quote: ammonium, 1s. 10½d. to 1s. 11d.; potassium, B.P. crystals, 1s. 7d.; granular, 1s. 7d.; sodium, B.P., 1s. 9½d. to 1s. 10d. for quantities in cases. British makers' list prices are as follows: ammonium, 1s. 11½d. to 2s. 1d.; potassium, B.P., 1s. 8½d. to 1s. 9½d.; sodium, B.P., 1s. 10½d. to 2s. per lb., as to quantity.

CAFFEINE is steady, with pure cryst. offered on spot from 6s. 9d. and citrate from 5s. 3d. to 5s. 6d. per lb.

CALCIUM LACTATE is steady on a quiet market: quoted from 1s. 2d. to 1s. 3½d. per lb., as to quantity.

CHLORAL HYDRATE is meeting with moderate business on a steady market: duty-paid crystals, 3s. 1d. to 3s. 3d. per lb., as to quantity.

CITRIC ACID (B.P. crystals).—There is nothing special to report: the spot position continues at about 2s. 1½d. to 2s. 3d. per lb., less 5 per cent. for foreign make; forward offers from Italy are still off the market.

CREOSOTE (B.P.) is unchanged on a quiet market at 1s. 8d. for quantities in demijohns; small lots, 1s. 9d. per lb.

CREOSOTE CARBONATE is quiet, with spot values quoted from 5s. 9d. to 6s. per lb.

GUAIACOL CARBONATE is steady on spot from 4s. 8d. to 5s. per lb.

HEXAMINE is meeting with the usual demand, with prices well maintained: free-running crystals, 2s. 4d. to 2s. 6d. per lb., as to quantity.

HYDROQUINONE continues to sell in fair quantities, with prices ranging from 3s. 8d. to 5s. 11d. per lb., as to quantity. LACTIC ACID (B.P.) is steady at Convention prices: five-ton lots, 1s. 6½d. up to 1s. 10½d. per lb. for small parcels.

METHYL SALICYLATE (B.P.) is unchanged with home makers in a good position: one ton, 1s. 6d.; ten cwt., 1s. 6½d.; five cwt., 1s. 7d.; one cwt., 1s. 7½d.; small lots, 1s. 8d. per lb., in demijohns, charged extra; 5-lb. bottles, 2s. 2d. per lb.

METHYL SULFONAL is steady on spot at 18s. 6d. to 20s. per lb.

PARA-FORMALDEHYDE is unchanged on a quiet market: quantities of 100 per cent. powder, 1s. 8d., in kegs; small parcels, 1s. 9d. per lb.

PARALDEHYDE is very quiet: quoted from 1s. 1d. to 1s. 4d. per lb., as to quantity and packing.

PHENACETIN is well held at last week's higher rates: crystals, 2s. 10d., in cwt. lots; powder, one penny more.

PHENAZONE is also firmly held at the recent advances: quotations now run from 4s. to 4s. 6d. per lb., as to quantity.

PHENOLPHTHALEIN is unchanged at Convention prices, which are being obtained for sales: quoted from 5s. 11d. to 6s. 1½d. per lb., as to quantity.

POTASSIUM PERMANGANATE (B.P.) remains very quiet except for small orders: quantities, in drums, 5½d.; small parcels, from 6d. per lb.

POTASSIUM SULPHOGUAIACOLATE is steady but quiet: spot is offered from 3s. 8d. to 4s. per lb., as to quantity.

SALICYLIC ACID (B.P.).—Home makers' prices, which range from 1s. 5d. per lb. for ten-cwt. lots up to 1s. 7d. for small parcels, are steady. No imported material offering.

SALOL.—There has been an advance of 6d. per lb. in prices to the following scale: two cwt., 2s. 8½d.; one cwt., 2s. 10d.; 56 lb., 2s. 10½d. per lb.

SODIUM DIETHYLBARBITURATE remains slow of sale: spot is quoted from 7s. 3d. to 7s. 6d. per lb.

SODIUM SALICYLATE (B.P.).—There is no further change in prices and the market is now generally steady. Home makers quote: powder, 2s. 2d. for ten-cwt. lots up to 2s. 4d. per lb. for small parcels, with crystals one penny more. Dealers' prices for Continental make to come forward: crystals, 2s. 6½d.; powder, 2s. 4½d. per lb., in cwt. lots.

SULPHONAL is steady on spot at 10s. to 10s. 6d. per lb.

TANNIC ACID (B.P. *levis*) continues quiet on a steady market: quantities, 2s. 10d.; small parcels, 3s. per lb.

TARTARIC ACID (B.P. crystals).—Business has not been of any great importance, but the spot market is steady at 1s. 4d. to 1s. 4½d. per lb., less five per cent. for foreign.

THYMOL remains dull, with prices unchanged: synthetic fine white, 9s. 1d. to 9s. 3d. per lb., as to quantity; ex ajoin seed, about 11s. 3d. per lb.

VANILLIN has been slow of sale, but there is no change in prices: 100 per cent. from cloves, 17s.; ex guaiacol, 14s. to 14s. 6d. per lb.

Industrial Chemicals, etc.

London, April 24

A MODERATELY good volume of business continues to be done in this market, with the general tone steady. Cream of tartar is steady on spot despite the rather slow demand. Potash products have been in more frequent request. Acetone is firm.

ACETIC ACID continues in very fair demand, with prices steady: 80 per cent. technical, £36 15s.; 80 per cent. pure, £37 per ton, in barrels; glacial, pharmaceutical, 99 to 100 per cent., £66, in glass demijohns; glacial, in barrels, £56 per ton, ex store.

ACETONE is firm at controlled prices: B.G.S., £76 to £85 per ton, in drums, ex store.

AMMONIA (ANHYDROUS) is meeting with the usual demand, with prices unaltered on a competitive market: quantities of 99.5 per cent., in loaned cylinders, 10d. to 1s. per lb., carriage paid; slightly less for big contracts.

AMMONIUM CHLORIDE is bright, with dealers' prices steady at £21 10s. per ton, for grey galvanising, in casks, ex store: slightly less for contracts.

ARSENIC.—Demand is still slow but prices are maintained for white Cornish at fully £16 per ton f.o.r. mines. There are, however, no pressing offers.

BARIUM CHLORIDE is offering on spot at about £11 5s. to £11 10s. per ton for 98 to 100 per cent. prime white crystals: market is about steady.

BLEACHING POWDER continues competitive, with 35 to 37 per cent. chlorine at £6 15s. to £7 per ton, for four-ton lots.

COPPER SULPHATE is very steady, although the export demand is not active, buyers being still shy on account of the recent wild fluctuations. Current terms may be called £29 10s. for casks f.o.b., less five per cent.

CREAM OF TARTAR is steady, while business is rather quiet for the time of year: foreign 99 to 100 per cent., 96s. to 97s. 6d. per cwt., less 2½ per cent., spot.

EPSON SALT is slow of sale: spot, commereial quality, £7 per ton, in single bags, ex store; slightly cheaper forward: B.P. quality, about £2 per ton more.

FORMALDEHYDE continues unsettled and tending to easier prices: spot, 40 per cent. by volume, £35 10s. to £36 per ton, in casks, ex store.

FORMIC ACID is dull but prices are steady: 85 per cent., in carboys, £46 to £46 12s. 6d. per ton, ex store.

ISOPROPYL ALCOHOL is receiving fair attention, with prices for good make steady at 11s. to 12s. per gallon, in drums, carriage paid.

LEAD ACETATE is easier with metal prices: spot, brown, about £41; white, about £42 per ton, in casks, ex store.

LITHOPONE is a good market, with 30 per cent. Continental red seal moving well at £19 10s. per ton, in casks, ex store; slightly less for contracts.

OXALIC ACID is steady and there has been a little more inquiry: quantities, £30 per ton, ex wharf; spot, 32s. per cwt., ex store.

POTASH CAUSTIC continues to sell at Convention prices, which are unchanged, with 88 to 92 per cent. solid from £32 15s. to £36 15s. per ton, in drums, ex store; 50s. per ton less o.i.f.

POTASSIUM CARBONATE is unchanged, with business fair: 90 to 92 per cent., £24 10s.; 96 to 98 per cent., £25 15s. to £26 per ton, in casks, ex store; slightly less for contracts.

POTASSIUM CHLORATE continues very quiet: quantities to arrive, 2½d. per lb., ex wharf; spot, from 3d. to 3½d. per lb., as to quantity, ex store.

POTASSIUM PERMANGANATE remains very quiet: quantities, in two-cwt. drums, 5½d.; small lots, from 5½d. per lb., ex store.

POTASSIUM PRUSSIAN is bright, with dealers' prices for yellow steady: quantities, £63 10s. to £65 10s.; single casks, 7d.; small parcels, 7½d. per lb., ex store.

SAL AMMONIAC is maintained at last week's figures with a good volume of business moving: dog-tooth crystals, £32; medium, £29; fine white crystals, £18 per ton, in casks, ex store; slightly less for contracts.

SODIUM ACETATE remains slow on spot, with the quotation at about £21 to £21 5s. per ton, in casks, ex store.

SODIUM CHLORATE is dull: quantities to arrive, 2½d., ex wharf; spot, from 3d. to 3½d. per lb., ex store.

SODIUM PRUSSIAN is steady and business continues satisfactory: quantities, from 4½d. to 5d. per lb.; small parcels, 5½d. to 5½d. per lb., ex store.

SULPHUR.—A regular outlet is reported both for crude and refined. American 99 per cent. crude ranges from £5 12s. 6d. to £5 17s. 6d. Sicilian flowers stand at £12 7s. 6d., refined ground at £11, and roll at £9 15s., all c.i.f. to arrive.

COAL-TAR PRODUCTS, ETC.—The chief alteration recorded this week is a firmer market for carbolic acid crystals. Other items are unchanged. Pitch and cresylic acid remain dull. **ANILINE OIL** remains unchanged at 8d. per lb., carriage paid, packages extra. **ANILINE SALT** is steady at 8d. per lb., carriage paid, packages extra. **BETANAPHTHOL** continues steady, with prices unchanged at 10d. per lb., carriage paid for quantities. **CARBOLIC ACID** (39° to 40° C. ice crystals) have advanced on a firm market and are now quoted at 6½d. per lb., carriage paid or f.o.b., in drums with over-casks, for minimum five-ten lots; crude carbolic 60's, 1s. 11d. to 2s. per gallon, naked at works. **CREOSOTE OIL** continues steady, with the market dull; ex works, 3½d. to 3½d. per gallon for light gravity, in bulk quantities. **CRESYLIC ACID** is unchanged, with little business moving: pale 97 to 99 per cent. American specification, 2s. 3d. to 2s. 4d. per gallon, f.o.b., drums extra; darker grades at cheaper prices. **NAPHTHALENE** is steady, with the market quiet: imported flakes and balls, £15 15s. per ton, in casks, ex wharf. **METHYL ALCOHOL** remains unsettled, with prices continuing at about £45 per ton, in drums, ex store. **PYRIDINE** continues nominal at 3s. 9d. to 4s. per gallon, f.o.b. **TOLUOL** continues at the advanced prices, with the market active; commercial 90's, 1s. 9d.; pure, 1s. 11d. to 2s. per gallon, at works. **XYLOL** is unchanged, with commercial quality at about 1s. 10d., and pure at about 2s. per gallon, ex works.

Fixed Oils, etc.

THESE markets continue generally quiet, but there is no great change in quoted prices, although some of the items are rather weak. Linseed oil is steady, while American turpentine has reached better prices. Palm oils are quiet. **ACID OILS**.—Business continues slow; prices about unchanged: coconut and/or palm kernel, 33s. 6d.; ground nut, 32s.; soya, 27s. 9d. spot. **CASTOR** remains quiet but values are unchanged: pharmaceutical, 51s. 6d.; first pressings, 46s. 6d.; second pressings, 41s. 6d. per cwt., in barrels, on the spot in not less than one ton lots. **COCONUT** is unchanged and remains quiet; deodorised, spot, 41s.; Cochin, 42s. 9d. c.i.f.; Ceylon, 34s. o.i.f. **COTTON** remains slow, with values about level on the week: deodorised, 38s. 6d.; common edible, 36s. 6d.; soap-making, 32s. 9d.; crude, 30s. spot. **GROUNDNUT** is dull and slightly easier: deodorised, spot, 43s.; crude Oriental, 35s. c.i.f. **PALM KERNEL** is easier and remains quiet: deodorised, 44s. crude, 35s. 6d. spot. **PALM**.—Business has been limited and the market closes quiet throughout; prices show some fluctuation but are about level on average for the week: Lagos, 34s. 6d.; softs, 33s. 4½d.; mediums, 35s. 6d.; hards, 35s. 6d.; bleached, 36s. 9d. spot. **RAPE** is dull and unchanged: refined, 45s. 6d.; crude, 43s. 6d. spot. **SOYA** is still slow of sale and is slightly easier: deodorised, 39s.; crude, 33s. 6d. spot. **LINSEED** (raw, naked).—Quiet markets are recorded, with prices for forward positions a shade easier: on spot, 29s.; April, 28s. 1½d.; May, 28s. 4½d.; May-August, 28s. 7½d.; September-December, 29s. 3d. Boiled oil, on spot, 33s. Hull, on spot, 28s. 6d.; April, 28s. 6d.; May, 28s. 7½d.; May-August, 28s. 7½d.; September-December, 29s.

TURPENTINE.—There has been a considerable improvement, which is attributed to much stronger American cable advices and a more active general demand both in America and on this side. On Tuesday 45s. was paid for spot delivery, compared with 42s. 3d. a week previous. On Wednesday evening spot closed steady at 45s. 3d. and May-June at 44s. London deliveries for last week were very good at 2,264 barrels, which makes a total since January 1 of 29,048 barrels, comparing with 32,377 barrels for the same period last year. Stocks were returned at 16,079 barrels, which, together with landings and afloats, make the London visible supply 17,370 barrels. This compares with 36,758 barrels a year previous. **RESIN**.—Demand has been rather patchy, but, on the whole, more active, which resulted in a large business at prices which rather favoured buyers. American c.i.f. terms are as follows: B/D 16s. to 16s. 7½d., E 17s. 4½d., F 17s. 7½d., G/I 17s. 9d., K/M 17s. 10½d. to 18s. 4½d., W/G 20s. 1½d., and W/W 21s. 9d. Terms ex wharf command 9d. per cwt. more, except for W/W, which is scarce and held for 24s. 6d. **WOOD**.—Hankow, in barrels, on spot is easier as quoted at 72s. According to export declaration returns, shipments of wood (tung) oil from Hong Kong to the United States in 1928 were over a million lb. in excess of the preceding year. The quantities and values for the two years were, respectively, 10,680,763 lb., value \$1,801,245, and 11,984,748 lb., value \$1,624,331. These figures represent about 12 per cent. in quantity of the total imports from China in 1927 and approximately 11 per cent. for last year.

LUBRICATING, MINERAL, BURNING OILS, ETC.—There is no further change to report, and the improved markets recorded are maintained, prices being unchanged as given in last week's issue (p. 485). **LUBRICATING OILS** continue very firm. Spot: pales, £10 to £22 10s.; reds, £11 5s. to £22; dark cylinders, £13 5s. to £33 10s.; filtered cylinders, £31 to £34 per ton, less 2½ per cent.

Bulgarian Rose Oil Exports

ACCORDING to the official Bulgarian statistics, exports of rose oil during November, 1928, amounted to 149 kilos, valued at 11,260,001 leva, consigned to the following countries:—Austria, 20 grams; Italy, 6 kilos; Poland, 3 kilos; United States, 8 kilos; France, 127 kilos; Switzerland, 3 kilos; other countries, 2 kilos. During the eleven months of 1928 3,053 kilos were exported, valued at 232,707,488 leva.

Dalmatian Insect Flowers

ALTHOUGH pyrothrum flowers are grown principally in Dalmatia and Montenegro, which are part of the Zagreb district of Yugoslavia, the offices of the trade are in Belgrade and 95 per cent. of the exports in 1928 was invoiced from there. During the past five years exports of pyrothrum flowers from Yugoslavia to the United States have been as follows:—

Year	Lb.	Value	Year	Lb.	Value
1924	...	32,612 \$9,189	1927	...	623,970 \$99,306
1925	...	374,133 \$39,862	1928	...	1,024,083 \$237,648
1926	...	77,693 \$13,015			

The percentages of the 1928 value were: Belgrade—96 per cent. and Zagreb—4 per cent. The Yugoslav annual production amounts to from 1,200 to 1,500 metric tons. The quantity declared for shipment above in 1928 represents approximately one-third of a year's crop. Until recent years, the crop has been marketed almost entirely through Trieste. More recently a tendency has been noted to sell directly to the consumer, thus eliminating the middleman.

Java Cinchona and Coca Exports

THE following table gives the exports of cinchona and coca from Java during 1928 compared with 1927 (amounts in kilos.) :—

	Cinchona		Coca	
	Jan.-Dec., 1927	Jan.-Dec., 1928	Jan.-Dec., 1927	Jan.-Dec., 1928
	kilos.	kilos.	kilos.	kilos.
Great Britain ..	490,372	409,650	—	—
British India ..	143,091	99,809	—	—
China ..	7,135	—	—	—
Germany ..	—	20,671	78,869	40,601
Italy ..	8,265	36,549	—	—
Japan ..	447,510	348,941	183,055	25,884
Netherlands ..	4,800,622	5,772,712	461,548	325,063
Port Timor ..	—	25	—	—
Russia in Europe ..	—	2,084	—	—
U.S.A. ..	—	—	—	21,780
Total ..	5,896,995	6,690,441	723,472	413,328

Exports of quinine from Java during the past year were 47,430 kilos. against 74,749 kilos. during 1927.



Letters for this section should be written on one side of the paper only. Correspondents may adopt an assumed name for purposes of publication, but must in all cases furnish their real name and address to the Editor.

The Business of a Chemist and Druggist

SIR,—Granted that your correspondent "Hopeful" (*C. & D.*, April 13, p. 457) is right when he says that such things as bookselling, restaurants, the sale of trunks and tea sets are not the legitimate business of a chemist and druggist, if we are to analyse the position of all the goods we sell, where are we to draw the line? He says that the title "chemist and druggist" should be made applicable to pharmacy alone with the addition of optics and surgical appliances; the first question which crops up is—what about photographic materials? Photography includes in its practice both optics and chemistry, and it was the retail chemist who did most to start it in favour among amateurs. Similarly with regard to perfumery, infants' foods, etc., all these things were the products originally of chemists, and chemistry goes a long way to their production still. If we are to give these things up, naturally other traders would have to refrain from the sale of drugs and chemicals (articles like sodii bicarb., borax, etc.); and as to dispensing or pharmacy proper, the charges would have to be considerably higher than they are at present if such a limited business were to be lucrative enough to pay its way. The fact is that with the big multiple concerns and departmental stores the small pharmaceutical portion of the business is only a draw for customers to get them into the habit of dealing there, and unfortunately the private chemist is getting into a very similar position. It is a regrettable position, but unfortunately it seems to have come to stay. What could be done would be to ensure that none but registered chemists were employed for dispensing and pharmaceutical work, not merely for nominal supervising as at present.

Faithfully yours,

HOPE ON (22/4).

Manufacturers and Retailers

SIR,—“Krites” (*C. & D.*, April 13, p. 451) asks a pertinent question when he inquires what right a manufacturer has to expect a chemist to stock any particular proprietary line. We are overburdened with these medicines and toilet preparations which spring up like weeds on all sides; and if we were to stock only a dozen of each one on the market, we should require unlimited capital and a warehouse big enough for a wholesale concern. But when it comes to manufacturers advising pharmacists to attain to a higher standard of an intelligent service to the customer, then they should be careful lest they fall into a pit of their own digging. For if the pharmacist were to appeal to the intelligence of the customer and to display half a dozen articles all claiming to be an infallible cure for some chronic complaint, surely it would be his duty to point out the impossibility of those claims, and the common sense of the customer should show him the futility of it. When it came to B.P. preparations pushed under fancy names, it would be the expert knowledge of the pharmacist which would draw attention to the fact, and also the price charged. Fortunately for manufacturers, and unfortunately for customers and pharmacists, some of the last-named are so anxious to grab the half-crown bonus for a window display that they continue to sell these things to a credulous public, and the rest of us are compelled to do the same unless we wish to see our trade go elsewhere.

Yours, etc.,

INTELLIGENTSIA (22/4).

Lemon Oil

SIR,—My attention has been drawn to the article which appeared in your issue of March 23 under the title “The Citral Value of Lemon Oil,” by the eminent *confère*, Mr. E. J. Parry. I may say that I am amazed at what is therein stated. He says having recently analysed a large

shipment of oil found to contain 4.1 per cent. of citral, whilst the relative certificate issued by this chemical laboratory of the Consiglio Provinciale dell' Economia showed 4.8 per cent. The discrepancy of the two results is so striking as to find no possible explanation, especially considering that this laboratory uses the “hydroxylamine” process for oil exported to Great Britain, and the “phenyl-hydrazine” method for goods sent out to America, and this in order to comply with the requirements of foreign pharmacopœias. Anyhow, whenever such abnormal differences show up, I venture to suggest the advisability that Mr. Parry takes the trouble of mailing to this laboratory a portion of the sample by him analysed, taking care to state under which precise number the relative certificate was issued by this laboratory, as well as the name of the export firm relating to it, and this in the intent of establishing investigations with a view of finding out whether any eventual discrepancy pointed out is possibly attributable to a material error, or to entirely different causes.—Yours, etc.,

E. BERTÉ.

Director of the Chemical Laboratory.

Messina.

Are Chemists' Windows so Valueless?

SIR,—It is gratifying to find that the trade is at last waking up to the fact that its windows are worth vastly more than the paltry remuneration hitherto offered by speciality proprietors for this valuable form of advertisement. If we are to succumb to the temptation of exhibiting other people's goods, let us at least see that we are adequately paid for the privilege. And the best means of securing satisfaction of our just claims is to adopt “Solo's” suggestion, that the R.P.U. should take up the cudgels on our behalf. It has done yeoman service in the past, and if now it would devote some of its time and resources to this new crusade it would add immensely to its prestige, which, I fear, has been somewhat dimmed of late by its misguided, undignified and withal futile fight with the makers of a popular brand of aspirin.—Yours truly,

C. S. ASHTON.

Brighton.

Opening in Business

SIR,—Your correspondent, “Optimist,” fires off such a battery of questions that it is difficult to know how to start in expressing an opinion in reply. As one who asked himself many similar questions nearly twenty years ago, and who, since that date, has answered most of them to his own satisfaction, my general comments may help him to solve at least some of his problems. To my mind, a man first starting in business for himself would nearly always be wiser in buying an established business. Let him ignore entirely the glowing descriptions of agents or vendors, obtaining from them only such essential information as rent, rates, particulars of lease, etc.—even these should be verified. The most important consideration of all in buying a business is its position. This he must judge for himself by watching the shop and the adjoining shops during the busy shopping hours. He can safely pay as much as he can afford to get a good business position; and given that, a man of initiative, energy and personality will surely make headway in spite of any competition. Figures of the previous returns of any business are only useful when considered with a knowledge of how the business has been conducted. One can frequently learn more by looking through a file of invoices than a book of “returns.” With regard to the relation of turnover to rent, I would not buy a business unless I considered that it was capable of taking, within a reasonable time, twenty-five times as much as the rent. The business mentioned by “Optimist” would probably not be worth while for a man earning £7 weekly as manager, unless the position was such that there was considerable room for increase of turnover. The great point is that he will probably never increase his salary appreciably; but once successfully launched as his own master his income is only limited by his own energy and enterprise.—Yours faithfully,

AN OLD HAND (18/4).

D. & P. Work Astray

SIR,—The most perfect machine is liable to slip sometimes, and when one does receive work which should have been sent to another photographic dealer, surely the right thing to do is to post the work back at the earliest possible moment, so that it may be set on the right track. Much time, temper, and telephone calls would be thereby saved. This is so obvious that one would not have thought it necessary to draw attention to the matter, yet experience shows that such work, not being the immediate concern of the recipient, is set on one side, and returned, if at all, only after several days' delay. What about a "Good Resolution" for the season now opening?—Yours faithfully,
Chippenham.

H. LONG.

Working for a Pittance

SIR,—It is unfortunate that the qualification of chemist and druggist has always had a definite value, and that value rarely a high one. Years ago I, as junior, and another as senior, both qualified, enjoyed between us less than £100 a year, indoors, and my colleague was a Major man at that. Pharmacy as the handmaid of medicine seemed a reasonable sort of slogan as an apprentice; but when I discovered the emoluments to be on the same kind of scale, the idea took on a different appearance when the pioneers of the multiple shop began their operations, qualified men could be had at 50s. a week, outdoors, of course, and the supply was ample. Salaries are now more in accordance with post-war conditions, but still not high by any means. There is one satisfactory point, viz., that N.H.I. has definitely cut out the extreme lowest price merchants, and add to this the larger weight of the scripts of the pharmacists. I think pharmaceutical leaders would be wise to keep an eye on N.H.I. statistics. The scripts are an important test of business, and it may be useful some day to have clear proof where and by whom these scripts were dispensed and the sums paid. In all the leading stores it is probable that the dispenser is qualified and gets a wage of £5 a week. How many fees must he earn to cover the bare salary every week of five and a half days, irrespective of all overhead costs? Well, 300 at 4d. would just do it. But would he dispense that number? I have known many store assistants, and they are not the kind to hustle. One of them—a dispenser—told me that he was refused a rise of pay on the ground that he was already being paid more than he earned in the way of script fees. He said, "I knew that myself." Prescriptions outside the N.H.I. were apparently negligible. Our fortunes may turn some day, and in the event of new pharmacy legislation it may be possible to circumscribe operations by some of the opposition. In fact, all dispensing may some day be done by pharmacists. We might make a claim to that, and it would not be easy for our opponents to prove that the work in their hands had any value whatever.—Yours, etc.,

EXPERIENTIA (15/4).

Examination Failures

SIR,—Last week's issue of THE CHEMIST AND DRUGGIST was, to me, of more than ordinary interest, chiefly on account of the annual report of the board of examiners signed by the president of the Pharmaceutical Society, and a statement made by him at the annual dinner of the North London Pharmaceutical Association to the effect that, speaking for himself and his colleagues on the Council, they were determined that they would not sacrifice any more principles. There appears to me to be a direct relationship between the report and the statement, for I have long been of the opinion that the degeneracy of pharmacy as practised in all its phases is solely due to violation of principles. The annual report shows that the chief reason for such a large proportion of failures in the Qualifying examination is lack of knowledge of these very principles. It appears that more attention is paid to memory and practice than to knowledge and principles. It may be assumed that this result is due to the poor training of the pharmaceutical schools. I think this assumption would be wrong. Pharmacy as a whole must accept the blame, but the Pharmaceutical Society, and its Council, as representing the majority of pharmacists, must accept the greater part of the blame. It were well to inquire as

to the ideas and principles held by the prospective pharmacist. Does he seek to take a lively share in the alleviation of human ills, or does he simply seek to live like a parasite on those ills? I am afraid that the parasite life is the one he chooses. He seeks to make money. The prospective pharmacist, with this paltry goal in front of him, knows that before he can attain his goal he must get his "licence," and so "a swatting" he goes, trusting that he will be lucky. During his apprenticeship he rarely nowadays gets any chance of practising real pharmacy. What chance has he of even seeing crude drugs, much less subjecting them to a critical examination? As for practising chemistry in any shape or form, it is not to be thought of. An intelligent "hand" in a manufacturing laboratory knows heaps more about pharmacy than the average pharmacist. I have known a qualified man, who could make one ounce of ointment quite respectably, make a horrible mess of 7 lb. of the same article simply because he did not apply the same principle to both. How can an apprentice realise his need for botanical knowledge? He never comes in touch with it in trade. Physics ditto—the pharmacist does not need physics in the average business. The report regarding pharmacy is tragic, but how can students really appreciate principles they are never called upon to practise? That they show an indifference to "manuscript prescriptions" is all to the good: chemists have bowed their heads to medical scrawling too long. As for a lack of neatness, what else is to be expected when the average pharmacy, shop and stock-room, is like a marine store with neither space nor facility for neatness and order? As for the poor preparation of aromatic infusions, I knew a qualified chemist who, making inf. buchu conc., boiled the liquid for about three days in an iron copper; boiled the liquid another day and immediately after adding the spirit, when cold, put the whole lot on to filter. Of course it would not filter. The problem is how to get out of the mess which has been accumulating for years. The "statesmen" do not appear to be big enough for the job. They are hoping, of course, for an Act of Parliament, Parliament being about the last place where principles are considered. Have they ever thought of what will happen when the party whip cracks? Pharmacy will be sacrificed to party practices, and members of opposing parties will oppose each other. Finally, let us assume that all the shortcomings in the report are overcome and that the pass percentage is 100. What would be the effect on pharmacists, i.e., employers employees and single-handed proprietors generally? I know what the solution is, but it requires a much wider application of principle than pharmacists are called upon to exercise. Is anything going to be done? I doubt it, not feeling optimistic.—Yours, etc.,

G. F. CORRALE.

Enfield Wash.

Council Election

SIR,—I note "Xrayser III" comments on Council candidates in your last week's issue. I was interested to know who were the nominator and seconder of one candidate (I am since interested to know them all). I accordingly wrote to the registrar for the information, but I was informed that the nominator and seconder had been written to and asked if they had any objection to these particulars being given, and they had both replied objecting to this being done. I have since been informed that the candidate himself, when accepting nomination, was pledged to secrecy, so that he was not allowed to inform his own local association who were kept in entire ignorance until publication. Who is this body that desires to work so secretively? I understand it has a title "I.C.O." and is responsible for more than one candidate. Is this so?—Yours, etc.,

INQUIRER (20/4).

Subscribers' Symposium

Medicamenta Depilatoria

Pitch and resin compounds are still used by Sudanese races to remove hair. I saw the operation performed in Wadi Halfa in 1917, accompanied by much facial grimacing on the part of the patient.—A. W. Hands, Birmingham.

Dispensing Notes and Difficulties

A Camphor Mixture

SIR,—Is there any way in which the following prescription can be made into a perfectly uniform cream without any little lumps :—

Powdered camphor	...	...	5ss.
Powdered gum tragacanth	...	...	5ss.
Precipitated sulphur	...	...	3iij.
Lime water	...	...	3iij.
Water	...	...	to 3vj.

Yours truly,

H. L. (12/82).

[We have prepared a satisfactory cream without any lumps by the following method :—Dissolve the camphor in 3iij of rectified spirit in a mortar. Add the powdered tragacanth and triturate to remove lumps; add the sulphur and triturate well to form a smooth thick paste. Add 3ij of water at once and triturate to make a smooth cream. Add the lime water in small portions with constant trituration, and finally make up to volume with water.]

Legal Queries

W. L. (19/4).—The use of the title "Skin and Blood Purifier" would render the article liable to medicine-stamp duty.

M. T. (21/3).—The powders would certainly be liable to medicine-stamp duty on account of the use of the word "Kure" in the title. The Board of Customs and Excise rule that spelling the word "cure" with a "k" instead of "c" does not exempt from liability.

B. (13/84).—If the aspirin tablets are not in any way held out as a preventive or remedy for a human ailment, and no statement is made to indicate that they are to be regarded as a medicine, they may be sold unstamped, and the vendor is not required to hold a patent-medicine licence.

A. C. (19/84).—If the formula of the ointment is printed on the label, and there are no other grounds which would render the article liable to medicine-stamp duty, it may be sold unstamped by chemists. However, it would have to bear a medicine stamp if sold by persons not entitled to the exemption extended in favour of "known, admitted, and approved remedies," since the use of the title "Kurexma" would, in those circumstances, involve liability.

A. J. T. (10/84).—A medical practitioner, or a registered dentist, is not required to keep a record of purchases of "dangerous drugs," provided the drug or preparation is administered by him, or under his direct supervision. On the other hand, a medical practitioner who supplies "dangerous drugs" to his patients is required to enter in a day book particulars of every drug or preparation supplied, together with the name and address of the person to whom it was supplied, and the date of the supply, and has to enter in a separate book kept for the purpose a proper reference to each entry in the day book which relates to the supply of any "dangerous drug" or preparation.

D. D. A. (11/84) is employed at a salary of £208 per annum. He is repaying his mother £1 per week for College expenses she advanced to him whilst qualifying. Can he claim for this in his return to income tax, together with items as overalls, books, travelling expenses, etc.? [This amount cannot be allowed as a deduction against "D. D. A.'s" income, and his mother should not include these £1 repayments in her return. Expenses incurred in earning income, such as overalls, should be claimed for, and if the travelling is in the execution of the employment and not incurred in getting to and from home to the place of business, such expenses will be allowed if claimed. If the mother maintained "D. D. A." whilst he was receiving full time instruction at a school and "D. D. A." had no source of income, his mother had a right of claim for this, if "D. D. A." was under the age of 21 at the time.]

Miscellaneous Inquiries

When samples are sent particulars should be supplied to us as to their origin, what they are, what they are used for and how. We do not undertake to analyse and report upon proprietary articles nor to publish supposed formulas for them.

D. L. E. (16/4).—OLEUM OVORUM.—This is prepared as follows: Fresh yolk of egg, carefully separated from the white, is heated in a porcelain capsule on a water bath with constant agitation until coagulation is effected. This can be ascertained by pressing a small portion of the contents of the capsule between the fingers, whereupon droplets of oil should exude from the mass. When this point has been reached the mass is transferred to a linen cloth bag and expressed between warmed plates of a press and the oil collected. Set it aside to deposit and filter. The resulting product is a thick yellowish oil which rapidly becomes rancid on standing.

Esquire (29/38).—The solution is a saturated one and the crystals come out when it is transferred to, presumably, a colder vessel. Try warming the syringe prior to filling it with the solution.

A. E. S. (10/48).—CHLORINE IN BEDDING.—To test the amount of chlorine in bedding flock we suggest the following procedure :—Put 100 gm. of the flock in a stoppered Winchester, pour on a measured litre of distilled water and shake at frequent intervals during two or three hours or longer, and then titrate the chlorine by silver nitrate and chromate in the usual way in a measured quantity of the wash water after filtering. Then, supposing that 800 cc. were titrated, it would represent the chlorine in 80 gm. of the flock. Naturally one may work with a much smaller quantity of flock, but if material is abundant a substantial amount should be used so as to make sure of getting a fair sample. If the volumetric method is not successful owing to the dye, the best way is to extract as before, add nitric acid and silver nitrate, collect the precipitate and determine gravimetrically in the usual way.

L. M. (10/48).—It is possible that the bursting of the bottles containing liquid paraffin is due to the expansion of compressed air when the container stands in a warmer place than where it was filled, plus a flaw in the bottle.

S. G. W. (13/48).—(1) The charge varies according to the business, but £2 2s. may be regarded as an average. (2) For making pil. fuschin. dilute with sugar of milk and mass with simple syrup.

L. W. M. (17/48).—CARBOY COLOURS.—The colours may be prepared as follows :—

Orange		Purple	
Potassium dichromate	... 1 lb.	Potassium permanganate	... gr. 40
Nitric acid	... 8 oz.	Sulphuric acid	... dr. 1
Water	... 2 gall.	Water	... 2 gall.

Dissolve the salt in the water and add the acid. See also C. & D., 1928, II, 418.

Retrospect of Fifty Years Ago

Reprinted from
The "Chemist and Druggist," April 15, 1879
Professor Redwood on Violet Powder

Professor Redwood [in a court of law] stated that violet powder was originally used as hair powder, and formerly consisted chiefly of starch mixed with wheaten flour and china clay. It was now used chiefly as a cosmetic. It can hardly be called a drug in the sense in which the word was used in the Sale of Food and Drugs Act. Every chemist had his own method of making it, which he usually kept a secret. He had analysed a sample of violet powder handed to him by Mr. Bird, and had found it to consist of hydrated sulphate of calcium, 73 parts; silicate of magnesia, 23 parts; powdered orris root and essential oils, 1 part. Starch was made at the present day by treating the powdered grain with caustic alkali, and from imperfect washing the finished product was often alkaline, and, therefore, likely to irritate the skin; he had recently had clear evidence of this, and he should consider a perfectly neutral, slightly soluble, and astringent powder, like selenite, a better application for the skin than starch.



[Commenced C. & D., July 5, 1924]

R

Rabies.—In classical Latin "rabies" was used to signify, among other things, frenzy in men or animals. In present-day medicine the term is restricted to a specific disease in animals, the corresponding disease in human beings receiving the name "hydrophobia." The disease, which is characterised by the presence of a specific poison (chiefly in the saliva and the nervous system), is believed to be transmitted by bites, presumably from wild animals in the first instance. The virus can be destroyed by heating to 48° C. for ten minutes, by prolonged exposure to sunlight, by mercuric chloride solution, 1 in 1,000, in a few minutes, and by a 5-per-cent. solution of carbolic acid in about an hour. In most domestic animals the incubation period varies from fifteen to sixty days. After the passage of the virus through several rabbits, this period is reduced to six or seven days; eventually the potency of the virus becomes constant, and virus thus standardised is used in the Pasteur method of prophylaxis. The disease as it occurs in domestic animals is broadly divided into two types, the "furious" and the "dumb"; but some of the symptoms are common to both types. Death occurs within a few days. In the "furious" form the most characteristic clinical feature, so far as dogs are concerned, is the change in the bark, which becomes high-pitched: in the "dumb" variety the dropping of the jaw is similarly diagnostic. The only method of determining the presence of rabies after death is by means of inoculation. A portion of the central nervous system is placed in glycerin for three days; an emulsion of the brain is then prepared with sterilised sodium chloride solution, and a few drops are injected subdurally into a rabbit. The incubation period varies from fourteen days to six weeks: the method occasionally fails owing to the contamination of the suspected brain with a septicæmic virus, which kills the rabbit before the presence of rabies becomes manifest. The disease in domestic or farm animals is so serious, both in itself and in the possibility of its resulting in hydrophobia in man, that animals are usually killed as soon as its presence is established. Kennels, collars and so forth which have been used by a rabid animal are usually disinfected with mercuric chloride solution, or some other strong antiseptic, and animals which have been in contact with others known to have been affected can be isolated for a time—some authors give the necessary period as four months. Owing to the systematic application of muzzling orders and of quarantine in this country, the occurrence of rabies has of late years been infrequent.

Racahout.—(1) A mixture of alimentary feculas and cacao sweetened with sugar and flavoured with vanilla; used in Turkey and Arabia, and credited with restorative value in illness. (2) Name popularly applied in France to *Salvadora persica* and a few other plants.

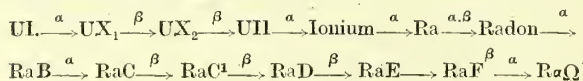
Racemic Compounds.—Optically active compounds owe their optical activity to the presence of what is known as (one or more) asymmetric carbon atoms. An asymmetric carbon atom is a carbon atom in the molecular structure, which is associated with four different attached atoms or groups. Every compound containing such an asymmetric carbon atom is potentially capable of rotating the plane of plane-polarised light, and as any compound of such structure is capable of existence in two forms, as represented by a tetrahedral formula for the carbon atom, one is capable of rotating the plane of polarisation to the

right (dextro-rotatory) and the other to the left (laevo-rotatory). Where such compounds exist, the optically inactive form, which consists of a mixture of the two optically active varieties in equal proportions, is termed a racemic compound. So many optically active compounds are now known, having equal dextro- and laevo-rotations in their enantiomorphic forms, as they are called, that one is justified in drawing the conclusion that where one only of the two forms is known, the other merely awaits discovery. There are, however, a certain number of compounds containing asymmetric carbon atoms which do not exhibit optical activity, and are not resolvable with the optically active compounds, and are therefore not racemic compounds. In these cases the molecule contains two (or a multiple of two) asymmetric carbon atoms, each of which (or each couple of which) affects the rotating power in opposite senses, and so the compound is inactive. Such bodies are known as being internally compensated. It was Pasteur's observations which led to a clearer understanding of optical activity, and he showed that racemic acid was the optically inactive form of ordinary commercial dextro-tartaric acid, and laevo-tartaric acid. Whilst the optical isomers of a racemic compound have characters which are identical, with the exception of rotative and crystalline form, the characters of the racemic compound are often different from those of its isomers. The conversion of an active form into the racemic form is termed racemisation, and may be effected in various ways. The resolution of a racemic compound can also in very many cases be effected. For example, combination of an acid with an optically active alkaloid will often cause the formation of two compounds of different solubilities, which can be separated by fractional crystallisation, and the original bodies regenerated in their optically active forms. When a body being an asymmetric carbon atom is prepared artificially or synthetically it almost, or probably always, invariably appears in the racemic form. Whereas the compounds formed in nature are usually optically active, but generally contain some of the racemic compounds as well. For example, dipentene prepared by the isomerisation of other terpenes is optically inactive, whilst in nature it is found as limonene in many essential oils. The correct nomenclature, of course, is *i*-dipentene, *d*-dipentene, and *l*-dipentene respectively. The limonene found in oil of lemon has an optical rotation about +60°, whereas that in oil of orange has a rotation of about +100°. The rotation of the pine isomers is about 120°, so obviously these natural compounds are mixtures of *d*-limonene and *l*-limonene in varying proportions. Fermentation of liquids containing racemic compounds frequently shows that the fermentation organisms have a selective action and destroy one isomer, so that the liquid becomes optically active.

Radioactivity and Radium.—There is a group of elements, known as radioactive substances, of which the most important is radium, present in natural uranium and thorium compounds, which emit radiations having distinctive properties. There are five different kinds of radiation that may be emitted by the members of this group of radioactive substances, namely:—*α*-rays. These are helium atoms carrying a double positive electric charge, and are derived from the nucleus of the radioactive element. Their initial speed ranges from 1.5 to 1.8×10^{10} cm/sec. Their path can be observed by passing them through super-saturated water vapour, which is condensed by the charge on the particle and shows its track as a streak of mist. If allowed to strike a screen covered with zinc blende they give rise to flashes of light, which can be seen clearly through a magnifying glass in the dark. Their penetration of other substances, even of gases, is small and is entirely due to the enormous energy of their motion. If *α*-rays are used to bombard other substances. *α*-ray particles that hit a nucleus of an atom of the bombarded substance will in many cases break it up with the evolution of hydrogen. The range of the *α*-rays is characteristic of the particular substance, the longest being that from thorium C with a range of 11.3 cm. at 15° and 760 mm. The greater the range of the particles the quicker the rate of decomposition of the substance. *β*-rays carry a negative electric charge and

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consist of electrons, having about $\frac{1}{1850}$ of the mass of a hydrogen atom. Their velocity is extremely high, never being less than $\frac{1}{3}$ of that of light, and in some cases approaching that velocity itself. They easily penetrate solid bodies to a considerable depth, dependent upon their velocity. The slower and less penetrative rays are known as "soft rays," while the more penetrative rays are called "hard rays," γ -rays. When β -rays strike a body they give rise to vibrations in the ether, of a similar nature to Röntgen rays. The γ -rays have no mass and therefore are not deflected by magnetic or electric fields like the α - and β -rays. They do not cause any disintegration of atoms on striking them, and the ionisation of the air by their passage is only 1/1000 of that caused by the β -rays, and 1/10,000 of that of the α -rays. Both α - and β -rays are stopped by a screen of lead 2 mm. thick, but γ -rays will pass through it almost unaffected. They are very hard, and on account of their power of deep penetration into bodily tissues are of great value in medical treatment. δ -rays appear when α -rays strike a solid substance. They apparently consist of electrons set free by the impact on the atoms of the obstacle. Their velocity is much less than that of the electrons of the β -rays. **Recoil rays** :—The emission of α - and β -rays gives rise to a recoil velocity in the direction opposite to that of the emission. The recoil rays thus consist of the atoms of the radioactive substance from which the α - and β -rays have been emitted. This product of the disintegration of the radioactive substance can be isolated by interposing a screen upon which it will collect. The chemical action of the various rays on striking chemical compounds results in a decomposition similar to that effected by light, but much more rapid and far-reaching. The decomposition depends upon the ionisation produced by the passage of the rays. Since the reaction produced is independent of the thermal effect of the transformation, a number of the reactions produced are reversible. The α -rays are the most active and the γ -rays least so. The rays from radium convert water into hydrogen and oxygen with the presence of a little ozone and hydrogen-peroxide. Ozone is also formed from the air by the passage of the radiations. Other chemical effects of the rays are exemplified by the bleaching of colours, the conversion of yellow phosphorus into red, the development of colour in glass, and, in general, the rapid production of changes in colour in many different minerals, among which the development of a yellow colour in natural sapphires to distinguish them from the artificial stones. Radium rays will hack the skin, producing sores, which, on healing, have a tendency to form cancerous growths. The rays, however, attack diseased tissues more readily than healthy ones. Consequently, their careful use is of very great value in destroying diseased growths. They are widely used for this purpose in medicinal treatment with considerable success, especially in the treatment of cancerous growths. β -rays will precipitate positively-charged particles from colloidal solutions. The emission of α - and β -rays, being the throwing off of material particles, results in the decomposition of the radioactive elements forming other elements, which are often themselves radioactive. Thus uranium gives out α -rays with the formation of UX, which, in its turn, emits β -rays forming UX₂, which in its turn decomposes, giving a chain of substances until a non-radioactive product is arrived at. The actual chain for uranium is :—



As the emanation of α -rays consists of the loss of a helium atom, atomic weight 4, it is clear that each element formed by the emission of α -rays will have an atomic weight less by 4 than that of the element producing it. The atomic weight of uranium is 238.2, therefore that of Ra Q is 206.2. Similarly the atomic weight of thorium is 232.15, giving an atomic weight of 208.15 for Th Q at the end of the thorium chain. The atomic weight of pure lead is 207.2, investigation of lead from

uranium minerals, however, gives atomic weight of 206.6, and from a mineral rich in thorium but poor in uranium gives 207.9. This and the following considerations arising from the operation of the periodic law indicate that the ultimate product of these radioactive elements is lead. The loss of an α -particle, besides decreasing the atomic weight by 4 units, results in the loss of two positive charges. On the other hand, the emission of a β -particle has no effect on the atomic weight, but only results in the loss of a negative charge. Consequently the product resulting from emission of an α -particle has an atomic number of 2 less than the parent element, and will occupy a position in the periodic system 2 groups to the left of the parent element. Similarly an element formed by the emission of β -rays will be found one group to the right of its parent. It happens from this that several elements can sometimes claim a single position in the periodic system. These groups of elements have been called "pleiads," and the single elements "isotopes." Isotopes differ from one another in the mass and structure of the nucleus, but not in the net positive charge thereon or in the outer electron layers. They therefore show identity in all properties depending upon these outer electron layers. The chief source of radium is pitchblende, from which it is isolated by first precipitating the mineral with sulphuric acid. The residue is converted into carbonates, and finally into chlorides or bromides, and lead is separated. Iron and alumina are precipitated with ammonia and calcium chloride extracted with hydrochloric acid. Fractional crystallisation accumulates the radium chloride or bromide in the least soluble fractions. 10,000 kilos of pitchblende will in this way yield 1 gm. of RaCl₂. Metallic radium is obtained by decomposition of the azide Ra(N₃)₂, or by decomposing the amalgam from electrolysis of solutions of radium salts with a mercury cathode. Radium has atomic weight 225.95. In air it immediately blackens, forming a nitride. The salts, if pure, only decompose slowly. The sulphate is the best soluble of those from the alkaline earth metals. It gives an intensely red flame coloration. Radium chloride, when solidified, is strongly luminous. The half-life period, by which is meant the time in which half the atoms are decomposed, thus reducing the radiation to half its original amount, is 1,690 years. This does not mean that the whole of the atoms are decomposed in twice this period, as during the second period half the atoms remaining at its commencement will decompose, reducing radiation to $\frac{1}{4}$, i.e., the radiation decreases in geometrical progression as the periods of time increase in arithmetical progression. The first product of decay of radium is a gas, radon or niton, which rapidly decomposes into other radioactive elements. This was the first element of which the formation was traced to radioactive change. Its molecular weight has been determined at 222. It is the radioactive element most commonly found in radioactive springs.

Radium and Radio-Active Ores.—The following statistics show the imports and re-exports of radium and radio-active ores (other than monazite sand) into the United Kingdom during the years 1923-27 :—

Imports					
From	1923	1924	1925	1926	1927
	lbs.	lbs.	lbs.	lbs.	lbs.
Total from foreign countries	117,718	209,817	68,832	334,880	4,536
Value	£ 6,303	7,434	1,713	5,202	388
Total from British countries	127,680	—	109,760	—	—
Value	£ 4,275	—	3,000	—	—
Total	245,398	209,817	178,592	334,880	4,536
Value	£ 10,578	7,434	4,713	5,202	388

Re-exports					
To	1923	1924	1925	1926	1927
	lbs.	lbs.	lbs.	lbs.	lbs.
Total to foreign countries	217,280	179,200	—	28	—
Value	£ 7,275	5,950	—	250	—



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We are frequently pointing out the wonderful pulling power of the 'ASPRO' Window Display on account of its linking up with continuous and ever-increasing publicity. A test made of a display will interest all chemists who wish to increase their business.

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Just have a look through your purchases of 'ASPRO' and you will find that you are in a position to buy on Bonus terms. Buying on Bonus terms means extra profit averaging 17% to you. So why not place your next order through your Wholesaler on Bonus terms?



WHAT THE BONUS IS

BONUS on 10's { One Gross Order - Bonus 1 doz. pkts.
Half Gross Order - Bonus ½ doz. pkts.
Half Gross 10's is minimum order accepted for Bonus purposes.

BONUS on 25's { One Gross Order - - Bonus 2 doz. pkts.
Half Gross Order - - Bonus 1 doz. pkts.
Quarter Gross Order - Bonus ¼ doz. pkts.
Quarter Gross is minimum quantity.

NO BONUS ON 60's.

CONDITIONS

The only conditions made are that the Chemist who buys on these terms undertakes to show Advertising matter in his shop window for 14 days and sell at advertised prices. As 'ASPRO' is so extensively advertised, this action will not only bring customers into the Chemist's shop to purchase 'ASPRO' but should enable the Chemist's staff to make other sales to the customers. Acceptance of Bonus is considered acceptance of conditions regarding display and selling prices. For Bonuses it is not necessary to buy both sizes at the same time, i.e., single lots 6 dozen 10's or 3 dozen 25's will qualify the Chemist.

HOW TO ORDER BONUS PARCELS

We do not sell direct to the Chemist. All our business goes through Wholesalers. Orders may be sent either to your Wholesaler or direct to us. If to us, state the name of your Wholesaler so that we may forward the order on, and the Bonus will be supplied direct by us.

ORDINARY PRICES for 'ASPRO' are as follows:

6d. size containing 10 tablets	- 4/6 dozen	NOTE.—2/6 size contains 10 extra tablets.
1/3 size containing 25 tablets	- 11/6 dozen	
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'ASPRO' consists of the purest Acetyl Salicylic Acid that has ever been known to Medical Science, and its claims are based on its superiority.

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Boxes of 6 Ampoules in doses of 2, 5, 10 and 20 cts. Acécoline.

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An organic Gold Salt for Intramuscular Injection.

Ampoules of 2 cc. containing 25 cts., each accompanied by an 8 cc. Ampoule of Saline for dilution.

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On P.A.T.A. LIST

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Box's Pills have a special public of their own—many of whom have had to go considerable distances to obtain their favourite medicine, or to order from Plymouth, for lack of a local source of supply. Pharmacists are now co-operating in distribution of Box's Pills in increasing numbers, and healthy local demand is developing. Stock them and show them and you will sell them. Display outers and other attractive show material free on application.

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THIS product has been employed successfully for some years in the treatment of high blood-pressure. The reduction brought about within one week, by so few as 15 tablets, is eloquent of its effectiveness.

ANABOLIN is being called for increasingly and can be obtained promptly through your usual wholesaler.

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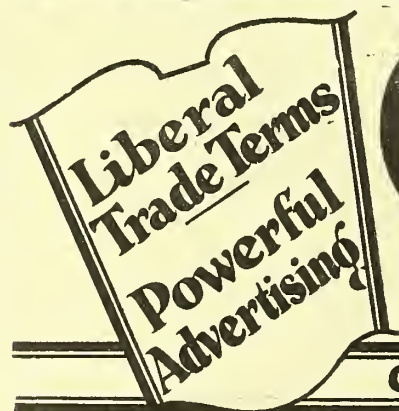
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YOUR PROFIT 33 1/3% ON COST.

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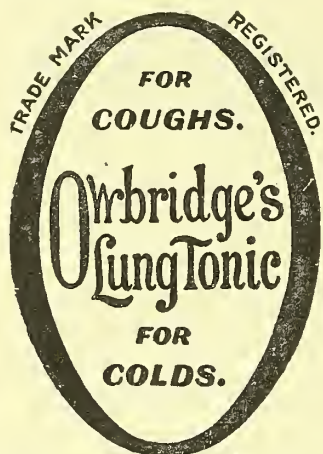
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Will be quickly helped by the use of this time-tried remedy.
Burn half a teaspoonful, inhale the fumes and the distress vanishes.

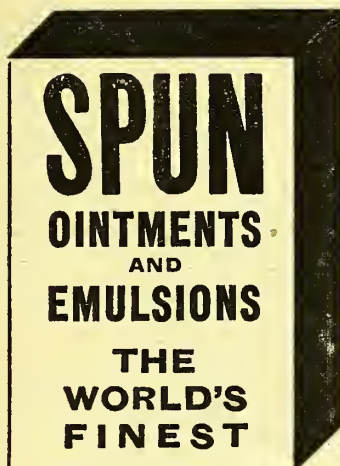
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Clarke's Blood Mixture	3/- & 12/-	£1:7:0 & £5:8:0
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Orders: Minimum quantity £16:4:0 value.
FREE CASES. Carriage paid upon orders of £100.*All Wholesale Houses keep a large stock of our Preparations and can supply smaller orders promptly.*Minimum Retail Selling Prices: 1/-, 1/3, 3/-, 5/- & 12/- Face Value, giving
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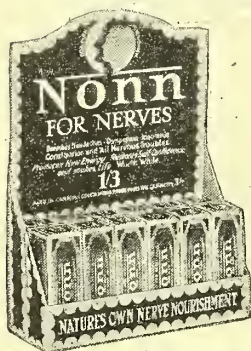
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Sole Distributors: Proprietors of Nonn Ltd.
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THE value of 'Yadil' is fully recognised by qualified judges. It has been sold all over the world and is being used to-day "back of beyond" as well as in the homes of our own country. Its sale is steadily increasing, old customers are retained while new ones are being added. One or two displayed bottles will quickly establish business which will prove profitable and regular. Any assistance we can give in the provision of advertising material is yours for the asking. The 'Yadil' lines cover, 'Yadil' Anti-septic (liquid and pills), 'Yadil' Ointment, 'Yadil' Pastilles and 'Yadil' Soap.

Yadil Products (1925) Ltd.
Sicilian House, London, W.C.1

*More and
more
everyday!*

Snowfire Cream is fast becoming the popular favourite. Chemists all over the country are sending in more and more orders every day. Women in their thousands are finding in this fragrant non-greasy cream a real skin beautifier. Recommend Snowfire and secure quick sales and a rapid turnover.

Snowfire CREAM



In handsome Opal jars and neat Aluminium Containers retailing at 1/3 and 3d, respectively.
F. W. Hampshire & Co. (1927) Ltd.
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Agents—India:
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121 Fort St., Port, Bombay.
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Messrs. Salmon & Spragg,
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BURGOYNE'S Universal Fruit Saline

"INCOMPARABLY EXCELLENT."



PRICES

Per 9/- dozen 1/3 retail
 „ 15/- „ 2/3 „

BONUS

1/2 dozen with 6 dozen
 1 „ with 12 dozen and
 1 „ miniatures value 3/6

PROFIT

6d. per bottle 1/- per bottle
 or 90% on best terms

« Show material as illustrated,
 with 3 dozen and upwards,
 the sturdy counter display
 stand with all orders »

Orders may be booked for im-
 mediate dispatch or to be held
 against motor deliveries

BURGOYNE, BURBIDGES & CO. Ltd.

Manufacturing Chemists

LONDON, E.6

Est. 1741

HYDROGEN PEROXIDE

IN BOTTLES—ALL STRENGTHS

Exceptional Stability and Purity

ATTRACTIVE TERMS

GENOXIDE LIMITED, LUTON



TRADE MARK
REGISTERED
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"SPETON"

Originally known to the
Medical Profession as
"SPERMATHANATON."

Entirely free of Quinine and Cacao butter

ANTISEPTIC PROPHYLACTIC TABLETS

Manufactured by

The Temmler Chemical Works, Berlin.

Sole Agents for U.K. & British Colonies,

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Shows the best profit to the Chemist
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NO Signature Required. Sold by CHEMISTS ONLY.

From all the leading WHOLESALERS. TERMS FROM

The Teasdale's Chlorodyne Co. 75 Fitzwilliam St. HUDDERSFIELD

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CROMESSOL

If not—may we send you
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THE CROMESSOL CO., 148, BRAND STREET, IBROX

THERE IS PROFITABLE BUSINESS TO BE DONE IN CINEMA SPRAY SOLUTIONS

ASK FOR SAMPLES AND PRICES.

JOSEPH BROOKS & CO., LTD.

Wholesale Druggists and Manufacturing Chemists.

42 SHUDEHILL

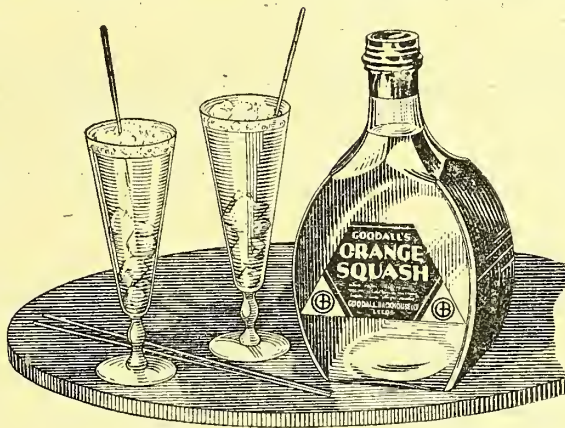
MANCHESTER

Make money from the demand for *Natural Drinks*—

GOODALLS' Fruit Squashes

This summer you will sell more — more easily

There are several good reasons why you will make more, and easier, sales and profits during the summer months by selling Goodall's Natural Fruit Squashes. What's in a name? In the name of Goodall, Backhouse there is a very big measure of public confidence. Anything offered under that name is accepted without question as the best of its kind. This simple guarantee of the maker's reputation means easier sales. Appearance helps largely, too. The decanters in which these Fruit Squashes are sold are handsome and distinctive in appearance. They are the sort of bottles that promise something good inside, that look as though the maker's had produced something worth offering in a worth-while fashion. Incidentally they are the sort of bottles worth keeping after the contents have disappeared. Appearance helps towards easier sales.



Quality counts most of all—more particularly in repeat sales which are most profitable. Goodall's Fruit Squashes are as good as pure ingredients and human skill can make them. There are 3 flavours, Lemon, Orange and Grape Fruit, and each is made from fresh fruit and pure cane sugar. No synthetic flavours are used—the clean, piquant,

refreshing flavour comes from fresh, ripe fruit, not bought unseen from distant groves but selected by experts with eye and palate from the latest arrivals at the Leeds Markets. Price too, counts heavily. Goodall's Natural Fruit Squashes are as good in quality as any on the market; they are lower in price than most.

A dozen bottles of Goodall's Natural Fruit Squashes are in themselves a display that will do all the selling necessary.

Backed up by this attractive showcard size 12½ in. x 9 in., given free with each order, they are irresistible. There will be a big demand for Fruit Drinks this summer. Send an order now and reap the golden harvest.

PRICE LIST

GOODALL'S NATURAL FRUIT SQUASHES

MADE in three flavours, Lemon, Orange and Grape Fruit, bottled in attractive clear-glass decanters.

Orange and Lemon make 6 Decanters to the gallon, Grape Fruit 8 and

their cost is 18/- per dozen (small quantities).

1 doz. case	-	-	-	17/-	net
3 cases at	-	-	-	16,6	net
3 doz. carriage paid,	Showcards Free				

GOODALL, BACKHOUSE & CO. LEEDS

Compound Syrup of Hypophosphites

TRADE **"FELLOWS"** MARK

Compound Syrup of Hypophosphites "FELLOWS," in addition to being in constant and increasing demand, adds distinction to a chemist's show window. It is a symbol of progressiveness and reliability.

Tablets Laxative "FELLOWS"

"The Tablet With a Pedigree"

IN TWO SIZES, NAMELY:

LARGE BOTTLES
(Containing 100 Tablets)

SMALL BOTTLES
(Containing 40 Tablets)

Fellows Medical Manufacturing Co., Inc.
26 Christopher Street New York City, N. Y.

LABORATORIES:
Mexico City, Mexico; Montreal, Canada; Paris, France; Milan, Italy;
Barcelona, Spain; Berlin, Germany.

Dr. J. Collis Browne's CHLORODYNE

has held a World-wide Reputation for OVER 75 YEARS

**Dr. COLLIS BROWNE'S IS THE ORIGINAL
AND ONLY GENUINE CHLORODYNE**

There is NO Substitute

As most wholesalers supply on our best terms, we shall esteem it a favour if you will order with other goods.
On P.A.T.A. PROTECTED LIST, and must be sold at face value.

**GOOD PROFITS
GUARANTEED**



Sole Manufacturers:
J. T. DAVENPORT LTD.
Union Street, London, S.E.



GLAXO PRODUCTS AND PRICES

	RETAIL	TRADE
GLAXO, Prescription (Humanised). Known as "Sunshine" Glaxo	2/-	19/3 per doz.
GLAXO, Prescription (Humanised). Known as "Sunshine" Glaxo	4/-	38/5 per doz.
GLAXO—Standard Full-cream	1/6	14/5 per doz.
GLAXO—Standard Full-cream	2/6	24/- per doz.
GLAXO—Standard Full-cream	4/6	43/2 per doz.
GLAXO—Standard Full-cream	7/6	72/- per doz.
GLAXO MALTED FOOD ..	1/3	12/- per doz.
GLAXO MALTED FOOD ..	2/4	22/5 per doz.
GLAXO MIXER	2/-	1/7 each.
GLAX-OVO	1/6	14/5 per doz.
GLAX-OVO	3/3	31/2 per doz.
GLAX-OVO	6/-	57/7 per doz.
GLAX-OVO MIXER	2/-	1/7 each.
GLAXO BRAND COD-LIVER OIL (Vitamin-Tested)	2/9	24/9 per doz.

Ostelin

"OSTELIN" VITAMIN D PRODUCTS
AND PRICES

	RETAIL	TRADE
"OSTELIN" (Glycerin Suspension) in 8 e.c. phials ..	2/6	22/6 per doz.
"OSTELIN" for Dispensing (in 2, 4, 8 or 16 oz.), per oz.	6/3	9/5 per 2 oz.
"OSTELIN" VETERINARY .. 1 oz.	4/6	40/6 per doz.
"OSTELIN" AMPOULES .. 3 in box ..	3/-	27/- per doz.
"OSTELIN" AMPOULES, 10 in box ..	8/6	76/6 per doz.
"OSTELIN" ELIXIR, for Dispensing, 1/2 lb. ..	5/8	4/3 per bot.
"OSTELIN" ELIXIR, for Dispensing .. 1 lb.	10/-	7/6 per bot.
"OSTELIN" EMULSION (Cream) 8 oz.	2/6	22/6 per doz.
"OSTELIN" NASAL SPRAY (OSNOL) .. 1 oz.	3/-	27/- per doz.
"OSTELIN" TABLETS .. 45 in bottle	2/6	22/6 per doz.
"OSTELIN" TABLETS for Dispensing 250 in bottle	12/6	9/5 per bot.
"OSTELIN" TABLETS, with PARATHYROID .. 100 in bottle	8/9	6/7 per bot.
"OSTELIN" TABLETS with PARATHYROID .. 500 in bottle	40/-	30/- per bot.
OSTOMALT 1/2 lb.	2/6	24/- per doz.
OSTOMALT 1 lb.	4/-	38/5 per doz.

Order through your usual Wholesaler

maltINE

MALTINE PRODUCTS AND PRICES

	RETAIL	TRADE
MALTINE (Plain)	2/3	20/3 per doz.
MALTINE (Plain)	4/-	36/- per doz.
MALTINE (Plain) Hospital size	15/6	11/8 each.
MALTINE with CASCARA SAGRADA	3/-	22/- per doz.
MALTINE with CASCARA SAGRADA Hospital size	5/6	49/6 per doz.
MALTINE with COD-LIVER OIL	22/6	16/11 each.
MALTINE with COD-LIVER OIL Hospital size	2/3	20/3 per doz.
MALTINE with CREOSOTE	4/-	36/- per doz.
MALTINE with CREOSOTE Hospital size	15/6	11/8 each.
MALTINE with CREOSOTE Hospital size	3/-	27/- per doz.
MALTINE with CREOSOTE Hospital size	5/6	49/6 per doz.
MALTINE with PEPsin and PANCREATIN	22/6	16/11 each.
MALTINE with PEPsin and PANCREATIN Hospital size	3/-	27/- per doz.
MALTINE with PEPsin and PANCREATIN Hospital size	5/6	49/6 per doz.
MALTO-YERBINE (Liquid)	22/6	16/11 each.
MALTO-YERBINE (Liquid) Hospital size	30/-	22/6 each.

MALTINE is a malt extract of high diastatic power and contains Vitamin B in notable proportion. In combination with cod-liver oil certified to be exceptionally rich in Vitamins A and D, it presents a completely proportioned food of great therapeutic value. MALTO-YERBINE presents MALTINE in conjunction with an active extract of Yerba Santa, thus providing an admirable nutritive and expectorant mixture which contains no opiates.

Glaxo Feeder

GLAXO ACCESSORIES AND PRICES

	RETAIL	TRADE
GLAXO BABY CREAM (in tubes)	1/6	13/6 per doz.
GLAXO BABY POWDER (in tins)	1/-	9/- per doz.
GLAXO BABY SOAP (3 tablet box)	1/6	13/6 per doz.
(In Irish Free State Soap prices are one-third more).		
GLAXO FEEDERS, Complete, 8 oz.	1/6	13/6 per doz.
GLAXO FEEDERS, Spare, 8 oz.	1/-	9/- per doz.
GLAXO FEEDERS, Premature, 4 oz.	1/6	13/6 per doz.
GLAXO FEEDERS, Miniature, 2 oz.	1/6	13/6 per doz.
GLAXO FEEDER MOPS	0/4	3/- per doz.
GLAXO MATERNITY BELTS (9 in. or 10 in.)	7/6	6/- each.
(Belts are not sent on approval.)		
GLAXO MEASURES (Aluminium)	0/6	4/6 per doz.
GLAXO NURSING TEATS	0/9	6/9 per doz.
GLAXO TEATS (7 kinds—square or fine hole, premature, blind, and 1, 3, or 5 lccch-bite)		
GLAXO VALVES	4 1/2 d.	3/4 1/2 per doz.
	3 1/2 d.	2/7 1/2 per doz.

*GLAXO BABY SOAP (3 in box) 1/6 per box 13/6 per doz.
GLAXO BABY CREAM .. 1/6 per tube 13/6 per doz.
GLAXO BABY POWDER .. 1/- per tin 9/- per doz.

* In Irish Free State soap prices are one-third more

Address Inquiries to SALES MANAGER, 56 Osnaurgh Street, LONDON, N.W.1

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PURE CULTURE YEAST TABLETS

100% Pure Yeast and 50% LIVING YEAST CELLS.

Bottles 25 Tablets 10½d. 50 Tablets 1/6.
P.A.T.A.

33⅓ % Profit to Retailer.

Special Bonus Offer for 14 days' Window Display.

TERMS ON APPLICATION TO
THE STANDARD YEAST CO., LONDON, W.4



Saint-Raphael

Tonic, Restorative,
Digestive Wine.

Known throughout the World,
and prescribed in all cases of
**ANÆMIA, DEBILITY, and
CONVALESCENCE**, to Young
Women, Children and the Aged.

DOSE: One wine-glass after the
two principal meals.

Recommended by—
PROF. BOUCHARDAT, Professor of
Hygiene, Paris Faculty of Medicine.
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"For more than thirty years St. Raphael Wine has been
exclusively prescribed, with success, in the Paris hospitals
as a pure tonic, by eminent physicians, such as Magendie
Ros on Chomel, Velpeau, Requin, Monneret, Trouseau,
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"The 'Vin de St. Raphael' is often used for ladies
nursing their own children; it is preferable to stout, which
creates an unhealthy fat."—*The Lancet*, London, England.

"St. Raphael Wine is most precious in all cases where
it is necessary to give tone to the system, without effort
or shock."—DR. C. DES BARRES.

Cie du VIN SAINT RAPHAEL, Valence, Drome,
FRANCE.

**To be obtained from all
Wholesale Druggists.**

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(SUMMER FLAVOURS)

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FOR SUMMER WINDOW
DISPLAY ALLOWANCES
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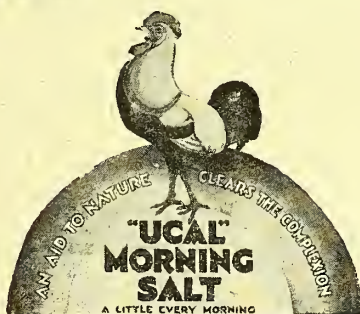
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NOTTINGHAM.

Good! It's Mason's

POPULAR

Ucal
The Sign of Reliability

RELIABLE

The Packand Show material which
supersedes all others—**UCAL MORNING SALT**Shows good Profit and
ever increasing Sales.**UCAL**—*The Brand Pre-eminent!***4 1/2 d. Size**

COSTS - 3/- doz.
6 doz. - 2/9 „
Gross - 30/- „

7 1/2 d. Size

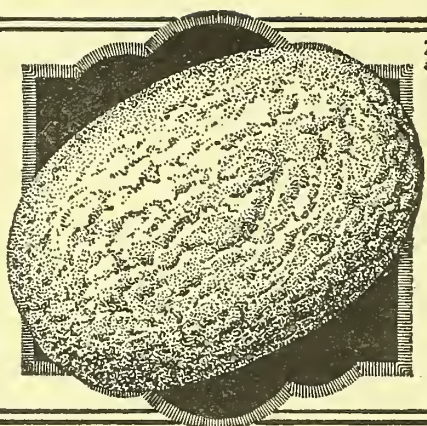
COSTS - 4/6 doz.
6 doz. - 4/- „
Gross - 45/- „



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Two thirds
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Bath Rusks

Unsolicited testimonials daily for Carr's famous Bath Rusks which are ideal for babies and young children. Scores of letters from grateful mothers. Recommended everywhere.

Made only by
CARR'S of Carlisle
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COD LIVER OIL

GUARANTEED GENUINE. FINEST PURE LOFOTEN.

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LARGEST MANUFACTURERS OF COD LIVER OIL IN NORWAY.
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Stocks always held in London.

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SELLS WELL IN SUMMER

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"The Malt that cannot crystallize."

We are in a specially favourable position to supply these commodities in **Bulk**. You cannot buy better.

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Carrying News of it into more than 9½ Million Homes

National Dailies — Provincials — Women's Magazines — Professional Journals

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At the breakfast table, in trains, on 'buses and trams, at their own firesides, people every day, in every part of the country, read the big national dailies—the Daily Mail, the Express, the News, the Chronicle, Mirror, Sketch—the very papers that are carrying the forceful advertising of this splendid new product!

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Let them know you stock it. Order Chocolate Flavoured Horlick's now! It comes in sealed glass bottles in decorative chocolate and orange cartons—so bright and attractive you'll find they make a welcome display on your counter or shelves. You can order direct from us or from your regular wholesaler. Carriage-paid parcels may include any Horlick product and also the new 4d. Mixer to which the usual discounts apply.

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On
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INSIST ON WIMACO MONARCH SEAL BRAND (Regd.). THERE IS NO SUBSTITUTE FOR WIMACO.
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**The best line for the
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Well advertised,
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and all support.

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Blue Carton Crêpe Bandages

	2"	2½"	3"	3½"	4"
Cost ...	12/-	15/3	18/3	21/3	24/3
Sell for ...	1/6	1/11	2/3	2/8	3/-

Discount for quantities: 3 dozen 2½%; 6 dozen 5%.

Attractive showcards on request.

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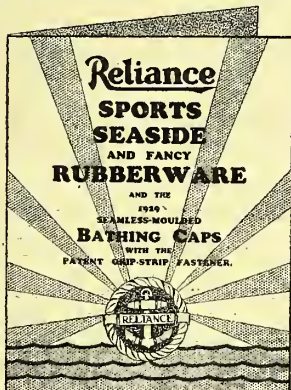
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"SEASIDE RUBBERWARE"
CONTAINS A HOST OF 1929 NOVELTIES

Seamless Moulded
**BATHING
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Unique Designs
Beautiful Colours

The Latest
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**SPONGE
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In colours to
match the
Bathing Caps.



THE SEASON'S
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CLINICAL
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7½d.

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CORN REMOVER
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Per Doz. 4s. 6d. Bonus of 3 with
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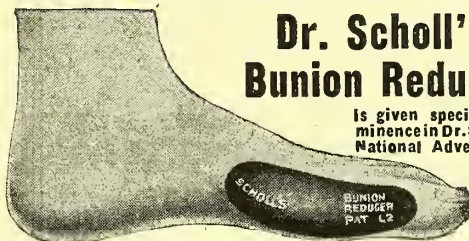
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Is given special pro-
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Sales of this popular line continue to soar. A window display will attract the demand to you. Thousands are daily obtaining relief from and correction of their bunion troubles by its use. Made of pure Para rubber. Men's and women's sizes. Rights and Lefts. Retail price 2s. 6d. each.

Write to-day for full particulars.

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SEAMLESS MOULDED SURGICAL GOODS, PESSARIES, HOT WATER
BOTTLES, URINALS FOR NIGHT OR DAY USE. Wholesale & Export Only.

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EXTENSIVE & WELL-ORGANISED WORKS enable us to quote competitive prices and give prompt deliveries.

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Immediate delivery from stock of all kinds of

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MEDICAL &
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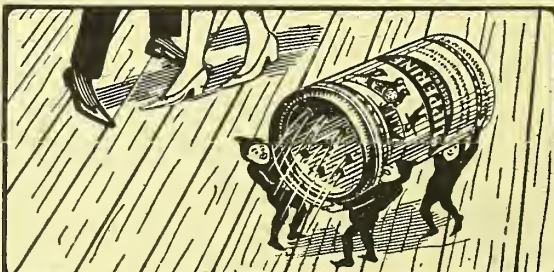
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The "International" Microscope
IMPROVED MODEL
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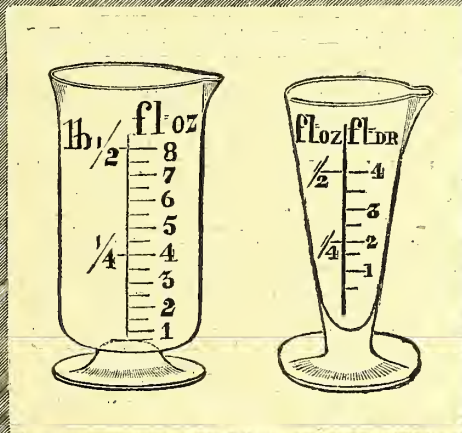


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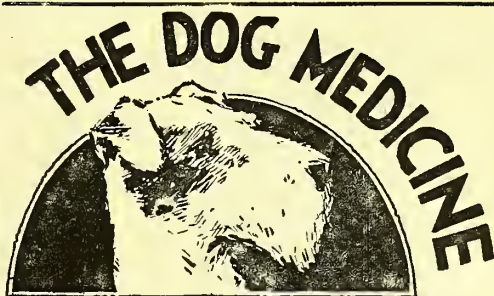
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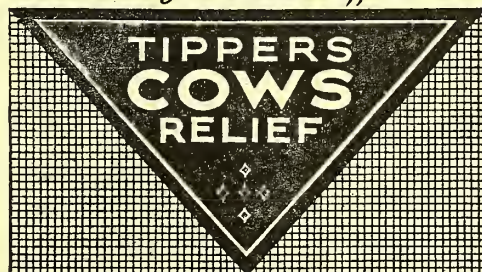
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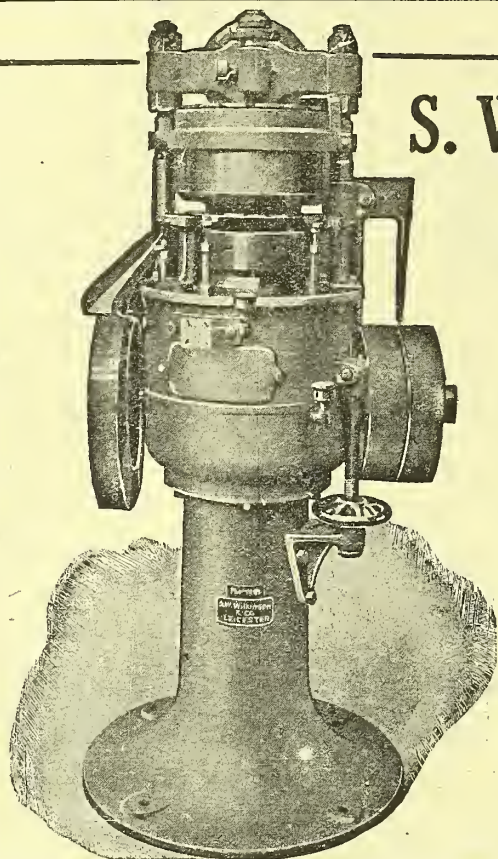
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Output 400 per min.

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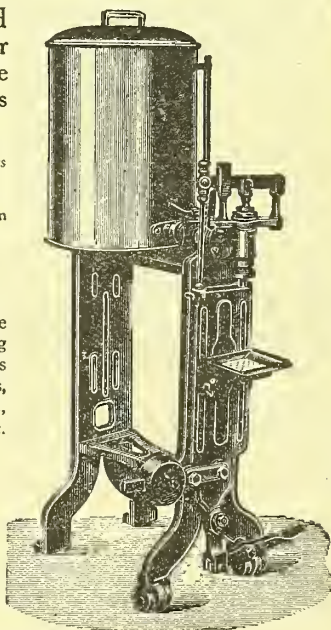
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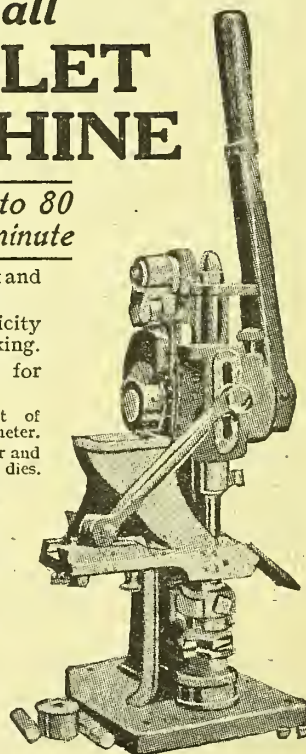
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The above conditions apply only to the United Kingdom.

Carriage Paid.

EXAMPLE.

	COST	SELLS FOR
3½ dozen 1/3 size at 12/- net	£2 2 0	£2 12 6
2 „ 3/- „ at 30/- „	3 0 0	3 12 0
	5 2 0	
Less 10/6 for Window Show	10 6	
	£4 11 6	£6 4 6

Showing a Net Profit of £1 13 0 on an outlay of £4 11 6.

Window Display Material Free and Carriage Paid.

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Carriage Paid.

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3/- „	...
5/- „	...
12/- „	...

Monthly Account.

12/- per doz. net.	
30/- „ „	
48/6 „ „	
114/- „ „	

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Phosferine and all of our Proprietary Medicines are supplied on the condition that they are not retailed in the United Kingdom under the following prices—viz., 1/3, 3/-, 5/-, and 12/-.

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THE CHEMIST AND DRUGGIST SUPPLEMENT

42 CANNON ST.
LONDON E.C.4

APRIL 27, 1929.

This Supplement is inserted in every copy of The Chemist & Druggist.

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2.—HARROW.—Retail, Dispensing and Photographic business; increasing turnover, last year approaching £1,550; shop well fitted and stocked; good living accommodation; long lease; rent £120; price asked £900.

3.—SOUTH KENSINGTON.—High-class Business, with Kodak Agency; established many years; turnover about £3,750; gross profit exceeds £1,400; very good position; best type district; approximate value of stock and fixtures £1,350; held on lease at rental of £220 per annum; further details on application.

4.—LONDON, S.W. (Main Road).—General Retail Business with Kodak Agency; established over 50 years; returns approach £2,000 per annum at usual prices; scope for increase; a new lease will be granted, or the premises may be purchased; price for business £1,300.

5.—LONDON, N. (Few Miles Out).—Good working-class Retail Business, with N.H.I.; returns average £27 weekly, plus N.H.I.; double-fronted shop, fitted in modern style and well stocked; rent £80; sublet 18s. weekly; long lease; price £800.

6.—CAMBERWELL (Near).—General Retail Business, with side-line, producing a net profit of about £700 per annum; scope for considerable extension; living accommodation; bathroom; 21 years' lease; rent £120; price £1,600.

7.—EAST COAST.—General Retail and Photographic Business, returns, under management, about £2,000 per annum; could be considerably increased by active principal; attractive shop, fitted in mahogany and well stocked; modern living accommodation; new lease would be granted; terms: goodwill £750, stock and fixtures at valuation.

Messrs. O. & Co. desire to emphasize the necessity of a periodical Statement of Account by which means alone Profit, the Value of Business, &c., can be determined. Involving as this does the labour of Stocktaking and Valuation, it is often omitted and eventually becomes confusion and loss.

8.—HEREFORDSHIRE (Borders of).—Very good-class Business, with Kodak Agency; established 1662; returns £3,100; net profit £620; chartered accountant's figures; double-fronted shop, well fitted and stocked; good living accommodation, with private entrance; rent £47; long lease; valuation terms entertained; total price about £2,250.

9.—SOUTH COAST.—General Retail and Dispensing Business, offering scope for increase; returns approach £4,600 per annum; chartered accountant's figures; double-fronted shop in main road; well fitted and heavily stocked; freehold must be purchased, further details on application.

10.—HERTFORDSHIRE (Borders of).—General Retail Business, with N.H.I. Dispensing; turnover small, about £800 per annum, but profits much above the average on account of small sales; single-fronted shop, well fitted and stocked; comfortable house; bathroom; large garden; back entrance; rent £55 per annum; for quick sale £600 would be accepted.

11.—HOME COUNTY.—General Retail and Dispensing Business; returns, under management, about £25 weekly; single-fronted shop, well fitted and stocked; rent £52; long lease; price £500.

12.—WATFORD (Few Miles from).—Good-class Retail and Dispensing Business, with Kodak Agency; returns, present rate, under the management of a lady, well over £20 weekly; scope for large increase; rent £50; held on lease; price £700.

13.—NORTHERN COUNTY.—For immediate disposal, General Retail Business, with Kodak Agency; returns average £1,000 per annum, with net profit £330 (auditor's figures); estimated value of stock and fixtures, £600; rent £35; rates £12; price for quick sale, £650.

14.—BOURNEMOUTH (Near).—Drug Store with Post Office and Tobacconist's combined turnover about £2,250 per annum; premises comprise two shops and living accommodation; rent £140; new lease will be granted; price £1,500.

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- 2.—**DURHAM CO.**—Chemist Business for immediate disposal; lease can be arranged at £30 p.a. rent; takings £17; Kodak and Ucal Agencies; good living accommodation. (174)
- 3.—**ESSEX**.—Two Chemists' Shops for immediate disposal; premises held on lease at rental of £62 and £52 respectively; returns average £1,189 and £792 per annum; price asked £1,000 all at. Full particulars on application. (187)
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- 5.—**LONDON, E.**—Old-established Retail and Dispensing Business; returns £5,600 p.a.; good living accommodation; freehold for sale, or would consider granting a lease; strongly recommended. Further particulars on application. (188)
- 6.—**LONDON, N.**—Established Chemist's Business; premises, which include convenient living accommodation, held on lease, 15 years to run; rental £50 p.a.; stock approx. £285; price asked £550, all at. Further particulars on application. (180)
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- 9.—**MANCHESTER (District)**.—Old-established Dispensing Chemist Business in good-class suburb on a yearly tenancy at £120 p.a.; let off £117; returns average £27 per week, all cash; excellent opportunity, as quick sale is desired; good reasons. (172)
- 10.—**SHEFFIELD (Suburb)**.—Chemist's Business; recently established; rent 14s. weekly; rates 7s. 6d.; returns approximately £780; could be considerably increased; offers invited. Further particulars on application. (189)
- 11.—**SOMERSET**.—Drug and Photographic Business; premises, which consist of lock-up shop with room at rear, held on lease with 8 years to run at a rental of £88 p.a. inclusive; good scope for live man; price asked £400. (178)
- 12.—**SOUTHEAST-ON-SEA**.—For immediate disposal, Chemist's Business, in busy centre; premises consist of lock-up shop, with Dispensing and storage room; rent £200 per annum, progressive; returns average £1,500, could be increased. Full particulars on application. (175)
- 13.—**STAFFS**.—Established Chemist's Business; situated on main road; unopposed in Photo and Optics; returns £24 p.w., scope for increase; lease can be arranged; rent £65 p.a.; price asked, lease and goodwill, £150, fixtures and fittings £150, and stock approx. £450. Full particulars on application. (179)
- 14.—**HAMPSHIRE**.—Family Dispensing and Retail Business for immediate disposal; premises held on lease 14-21 years at a rental of £90 per annum, including excellent living accommodation, garage, good garden; old-established business; shop beautifully fitted; returns £1,900; Medical Wine Licence; price to be arranged; full particulars on application. (190)

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- 42.—**LONDON, S.W.**—Unopposed position, drawing upon big district, and doing £1,200; owner retiring; young pharmacist could easily increase; Kodak, N.H.I., and Prescribing. Full particulars on application.
- 41.—**BLACKPOOL**.—Increasing Business, doing about £42 weekly and showing net profit of £450; good photo turnover; stock and fittings about £750 (valuation accepted) and reasonable goodwill; offers invited.
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- 39.—**LONDON, N.W.**—£350 secures Drug Stores doing £790 per annum; splendid opportunity for pharmacist beginner introducing Dispensing and N.H.I.; write or phone early for full particulars.
- 38.—**LONDON, W.**—Good Family and Dispensing Business; lease 11½ years; turnover £2,500; stock £650; fixtures £250; price £1,400.
- 37.—**LONDON, S.E.**—Unopposed position, with good house; 12 years' lease; rent £52 p.a.; present turnover £1,430; capable of increase; Kodak and Ucal Agencies; splendid opening for Optics; price £850.
- 36.—**LONDON, E.**—Main road position, long lease; rent £120 p.a., with small living accommodation; present turnover (average) £1,560 p.a.; N.H.I., Kodak Agency; price £400; stock at valuation.
- 31.—**LONDON, W.**—Good opportunity for energetic man in middle-class Business, doing £1,410 p.a.; gross 40%; long lease; accountant's figures available; price £1,050.
- 29.—**ESSEX COAST**.—Owner retiring; established 25 years; Family and Dispensing, with Photo; no opposition; present turnover £1,100; good opportunity for "live" pharmacist; price £700.
- 28.—**SUSSEX COAST**.—High-class Pharmacy, fully stocked; Library, 200 books; lady assistant; new fittings; 20 years' lease; rent £96; rates £30 p.a.; average £35 p.w. (only opened 9 months); excellent prospects; N.H.I., 300 per month; house attached, electric all through, 5 rooms, bathroom (h. & c.); price £2,000.
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- 6.—**LONDON, E.**—Unopposed position; population 14,000; N.H.I., Kodak Agency, also big Prescribing; capable of considerable increase; turnover £1,517; profit £203; rent £65 per annum; sub-let £52 10s. per annum; price £875.

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(One minute from St. Pancras and King's Cross Stations.)

- 1.—WYE VALLEY (Near).—Old-established, high-class Business in very best position of market town; returns over £3,000; good profits; audited books; modern pharmacy and large house; long valuable lease; price about £2,200.
- 2.—SOUTH COAST.—Good-class Retail and Photographic Business, with exceptional sale of own specialities; returns, under manager, £1,450; plenty of scope; central position; handsomely-fitted pharmacy and good stock; price £1,050.
- 3.—SOUTHERN COUNTY.—Good-class Business, with Kodak Agency; returns £25 weekly; excellent prospects; good position; low rent; house available; price £900; £200 can remain.
- 4.—DORSET COAST.—Profitable Drug Store and Tobacconist's Business, in prominent position; returns £2,150, besides valuable appointment; net profit £535; audited books; smart shop, well stocked; living accommodation over; price £1,500.
- 5.—ESSEX COAST.—Light Family Retail; same hands many years; retiring; returns about £1,500; net profit £400; no Photo or other side lines; plenty of scope; good house and garden; price, with freehold, £2,000.
- 6.—NORFOLK.—Old-established Mixed Country Retail; unopposed; returns £1,160; books properly kept; large house, garage, and splendid garden; well stocked; price £900 or offer.
- 7.—SURREY (15 miles out).—Good-class Family Retail and Dispensing Business, in excellent position; returns £35 to £40 weekly; long lease; well stocked; price £1,700.
- 8.—WEST MIDDLESEX.—Good middle-class suburban Retail, in growing residential district; returns over £1,500, increasing; books audited; modern pharmacy, with house attached; long lease; price £900.
- 9.—SOUTH LONDON.—Chemist's Business, with Post Office attached, in main road position; plenty of scope; net income £700 a year; well-fitted pharmacy, with house; 21 years' lease; price all at £1,500.
- 10.—LONDON, S.W. (Busy Main Road).—Light Cash Retail, with Kodak Agency and N.H.I.; returns last year over £2,000; large house and pharmacy; same hands many years, retiring; price for early sale £1,300.
- 11.—LONDON, E.—Cash Retail, Prescribing, with Kodak Agency; returns about £1,200 under manager; good profits; smart pharmacy; good stock; price £600, or first reasonable offer.

Etab. 1870.

Telephone: Terminus 3574.

JOHN BRIERLEY, F.N.A.A.

CHEMISTS' VALUER AND TRANSFER AGENT,

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Exclusive offers: Isle of Wight, Blackpool, High Peak, Southport (near), and Manchester, at valuation. Approx. £800 to £1,500 required.

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I have a ready market for sound businesses with a turnover of £2,000 per annum or over. Write to me. Strictest confidence observed.

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APPRENTICE WANTED.

APPRENTICE wanted for high-class Dispensing business. W. Browne & Co., 509 Finchley Road, Hampstead, N.W.3.

BUSINESSES FOR DISPOSAL.

BRIGHTON.—High-class Dispensing Business, with Kodak Agency; splendid position; lock-up shop; valuable lease; main road; N.H.I.; returns over £2,000; price £1,500; splendid opportunity. Full particulars on application. Bankers' references. 235/3, Office of this Paper.

COVENTRY.—Branch Business, old-established, Wine Licence, Kodak; lock-up shop; rent £52 per year; returns £1,200 per year; price £200 and value of stock and fixtures. Jos. Robinson, 22 Cross Cheaping, Coventry.

EAST KENT.—Branch Business; middle and working-class trade; Kodak Agency; returns £900; neatly fitted shop and storerooms; new lease granted at low rent; price £550 for immediate sale. "Salol," 235/39, Office of this Paper.

LEEDS DISTRICT.—£200. Drug Store, main road, working-class district; electric light; small house; returns small, but plenty of scope for qualified man; rent 68s. monthly. Also Drug Store, main road, similar to above; rent £50 per annum; lease granted; turnover £10 weekly; scope for qualified man; price £550, or near offer. Marsden, 44 Sholebroke View, Leeds.

LEICESTERSHIRE.—Unopposed Village Drug Stores, central of 5,000; no qualified man near; returns £700, increasing; good opening for N.H.I.; price (including motor cycle combination worth £75, optional) £250 for quick sale, vendor having bought business on South Coast. Brett & Co., Chemists' Valuers, 20 Springfield Road, Leicester.

LIVERPOOL.—High-class Pharmacy; double-fronted shop; corner; very busy thoroughfare; turnover £1,820, past year; stock about £700; fixtures valued at £500; low rent; lease; good reasons for disposal; lock-up; excellent opportunity; £1,500. Apply Messrs. Watts, Estate Agents, 28 Paradise Street, Liverpool. Phone: Central 1631.

LONDON, S.E. (central and unique position).—Dispensing and select business; established 1850; exceptional scope and opportunity for wide development; low rent; long lease; £900, 250/14, Office of this Paper.

LONDON, W. (main road, unique position).—First-class Retail Business, with good connection; handsomely fitted; frontage about 36 ft., depth about 80 ft., and upper part of 12 rooms; back entrance; suit multiple Chemists, etc.; price freehold, including fixtures and fittings, £12,000; s.a.v. Write The Jackson Estates, 84a Charing Cross Road, London, W.C.2.

LONDON, N.W.—Established Pharmacy in thickly populated good working-class neighbourhood; lock-up shop on long lease at small inclusive rental; turnover for 1929 (increasing) averages £24 per week, exclusive of N.H.I., at good profits; Kodak Agency, etc.; interview and investigation invited by intending purchasers; valuation terms or offer. 231/20, Office of this Paper.

LONDON, E.—Lock-up Drug Stores, taking about £70 monthly under management; rent 22s. weekly, inclusive; price £450, including stock and fixtures £200. P.C.B. 26/4, Office of this Paper.

LONDON, N.W.—High-class Dispensing and Retail, with Photographic, on busy main road; increasing business; long lease; good living accommodation; price £2,350. Full particulars on receipt of banker's reference. 235/28, Office of this Paper.

LONDON, N.E.—Good-class Retail and Dispensing Business, with Kodak Agency; net profit approaches £1,000 per annum; good living accommodation; new lease; valuation terms entertained; owner retiring. 147/221, Office of this Paper.

MANCHESTER.—High-class Dispensing and Retail Business with premises for Sale in good suburban district on busy main road; good mahogany fittings and well stocked; excellent living accommodation; takings average over £1,000 per annum; scope for increase; price of property £1,400; business £750. 224/1, Office of this Paper.

MIDDLESEX (20 minutes from Baker Street, Met.).—For immediate Disposal, owing to owner having bought larger business, established Chemist's Business; persistently increasing; turnover last year over £1,500; long lease; good house attached; accountant's figures; £850 or near offer; cash only. Would make good branch. 235/38, Office of this Paper.

MIDLANDS.—General Retail, Dispensing and Kodak Business in populous district for Sale; returns average 16 guineas per week; net profit 25 per cent.; rent £50, which includes good house, with bath, electric light and garage; established seven years; price £500 for stock and fixtures; all in excellent condition; ideal for young married couple. 232/19, Office of this Paper.

MID-WEST WALES.—Old-established Mixed Retail Business; Counter, Prescribing; Wines and Spirits; Kodak and Gilbey's Agencies; Optics (big scope for qualified man); long lease. Full particulars, 230/24, Office of this Paper.

SOUTH COAST.—For Sale, recently-established Business (six months) in improving position on main road; present turnover £15 weekly; value of stock and fittings £500; double-fronted roomy shop and good living accommodation; 14 years' lease; offers invited; owner going abroad. Write 147/220, Office of this Paper.

SOUTH DEVON.—Well-fitted, spacious lock-up Pharmacy on main road in rapidly growing district; excellent opening for young qualified Chemist; Kodak Agency; Dispensing and Prescribing; premises, stock and fittings, £600 inclusive. "Pharmacist," 2 Salcombe Road, Plymouth.

WESTERN COUNTIES.—Sound, high-class Business for Sale; established over 150 years; best position in town; long lease; living accommodation; good all-round stock; expenses low; turnover over £3,000 per annum, accountant's figures; good Optics and Photography; every investigation to *bona-fide* clients; cash buyers only and bank references essential. Apply 231/2, Office of this Paper.

£400.—SMALL Northern Toilet Manufacturing Firm; established 7 months; excellent connection, with great scope of increase; low rental and overheads; large profits; absolute sacrifice; good reasons for selling; full investigations. 230/21, Office of this Paper.

A VERY old-established, good-class Chemist's Business for disposal, situated in good position in the main street, with excellent living accommodation; owner retiring; no agents. Apply "Honest," c/o Wright, Layman & Umney, 44 Southwark Street, London, S.E.1.

COUNTRY Pharmacy, West Midlands; Dispensing, Photographic; large N.H.I.; returns over £800, increasing; good house and garden; electric light and water; rent and rates £1 per week; long lease. What offers? 229/32, Office of this Paper.

ERNEST J. GEORGE invites correspondence from one or two young Pharmacists who would be interested in an "English" Pharmacy on the Continent; owner retiring; splendid partnership opportunity; capital required £7,000 to £8,000. Bankers' or other references should accompany inquiries which should be addressed to 3 St. Paul's Close, Walsall.

UNIQUE opportunity occurs for energetic man to acquire a Light Retail in Essex Coast town; advertiser, who is leaving drug trade, can prove offer is genuine, and is sacrificing through ill-health; shop beautifully fitted; nicely stocked; low cash figure for quick sale; interview preferred to lot of correspondence; viewed any time. "Genuine," 231/17, Office of this Paper.

PREMISES TO LET.

NEW BOND STREET.—Modern, small, well-lighted Shop a few yards from Bond Street, well suited for Chemist's Business, with good passing trade; close to Claridge's Hotel; rent and rates under £300; no competition. 146/197, Office of this Paper.

SHOPS with Flat over to Let on lease in excellent position at Bromley; suit Chemist. Apply Baxter, Payne & Lepper, opposite G.P.O., Bromley, Kent.

TO Let, in Doncaster's main shopping thoroughfare, two co-adjointing shops, suit any business but particularly good opening for Chemist, in immediate proximity to thickly populated working-class area; nearest competing chemist quarter mile away; reasonable rent, with option of lease to good tenant. W. Elland, "Thornhill," Bawtry Road, Doncaster.

TO Let, Pharmacy and Drug Stores; Kodak Agency recently acquired; double-fronted, attractive lock-up shop and parlour in main road, Dagenham, nearly opposite H.M.V. Works; neighbourhood being largely developed; business opened September last, and takings under female management have averaged to date £10 weekly; no Dispensing or Photography hitherto done, which should double turnover; urgent sale necessary; rent only 25s. to good tenant; good stock and excellent fittings, all in for £300, of which part could remain; a gold mine to someone really interested. Write, or 'phone Romford 959, French, 466 High Road, Dagenham.

PREMISES FOR SALE.

FINE modern Shop and Rooms, growing district, outskirts of E. Croydon; freehold; cash deposit; balance as rent. Pratt & Co., 46 High Street, Croydon. 'Phone 0625.

OPPPOSITE TUBE STATION. — Chemist's opportunity to establish remunerative business on high-class promenade at Edgware, opposite Tube Station, centre of large and rapidly growing residential district; first 16 shops all disposed of (including four to handsome drapery establishment); additional shops now being completed; wonderful chance for progressive man; ultimately this important promenade will comprise about 40 shops (cinema site in addition); principal market centre; good, deep shops, two floors over, for Sale freehold, or would be Let on lease to approved trader. Call or write Sole Agent, Leslie Raymond, Chartered Surveyor, 24/25 The Mall, Edgware. Edgware 0115.

PATENT FOR DISPOSAL.

THE Proprietor of British Letters Patent No. 250,920, dated April 17, 1925, for "Pocket Atomiser," is desirous of disposing of the Patent Rights or of negotiating for the grant of Licences to work thereunder. All inquiries should be addressed to Messrs. Mewburn, Ellis & Co., 70-72 Chancery Lane, London, W.C.2.

FINANCIAL.

ESTABLISHED Proprietary, which has been consistently advertised, for Sale, £8,000, or for financing as limited company; stocked by most London and several Provincial Wholesalers, Boots, etc., and over 250 Private Chemists; splendid prospects in hands of firm with advertising capital. Apply 230/29, Office of this Paper.

PRIVATE limited company, manufacturing well-known patented Dental Specialities, would consider the appointment of a young experienced Salesman with knowledge of Advertising and Marketing Specialities of this nature; would have full control of the management and finance of this business; preferably with capital of between two to three thousand pounds. Apply to 227/28, Office of this Paper.

SITUATIONS OPEN.

RETAIL [HOME.]

BIRMINGHAM.—Junior required, good appearance and address; experienced in Toilet, Photographic and Dispensing. Please state age, height, experience, salary (outdoors), etc. Applications not answered in a week respectfully declined. 230/37, Office of this Paper.

BIRMINGHAM.—Assistant, qualified, not under 26; good Dispenser and Counterman important; capable of taking charge; unmarried and abstainer preferred; knowledge of Photographs. State full particulars, salary, experience, and photo to "Pharmacist," c/o Southall Bros. & Barclay, Lower Priory, Birmingham.

BIRMINGHAM.—Wanted, June 1, smart, qualified Manager for growing branch; salary and liberal commission on returns; permanency for the right man; living accommodation if required. Give full particulars and salary required to 233.29, Office of this Paper.

BRADFORD.—Wanted, smart young Qualified Assistant. Apply, with full particulars, with photo, to M. Rogerson & Son, Ltd., Darley Street, Bradford.

BRADFORD ROYAL INFIRMARY.—Qualified Locum (male) wanted for three weeks from June 10th. Apply, stating salary required and usual particulars, to the Secretary-Superintendent.

BRIGHTON.—Gentlemanly, qualified Senior immediately, who will interest himself in good business; must be able Counterman, reliable Dispenser; knowledge of Photography, Optics an advantage; age 28 to 38. Apply, full details salary, photo, Sidney Lane, Chemist, 100 Western Road, Hove.

CHESHIRE.—Wanted, Assistant (male) for pleasant country Family Retail and Dispensing business (no heavies); qualification not essential. State all particulars in first letter, with photo if possible. E. B. Brigham, Little Sutton, Wirral, Cheshire.

CLEVEDON, SOM.—Junior Assistant, unqualified, in good-class Dispensing business. Please state age, height, experience, salary required (outdoors), and enclose photo (to be returned), J. H. Shepherd, Pharmaceutical Chemist, 16 Hill Road, Clevedon, Som.

ESSEX.—Qualified Manager required for a middle-class Family and Dispensing business; good opportunity for a man with initiative and able to increase turnover. 147/205, Office of this Paper.

HAMMERSMITH.—Good Unqualified Assistant required immediately; opportunity for a smart man with ability who is anxious to make good progress. Please give all details in first letter. 147/207, Office of this Paper.

HACKNEY.—Trustworthy man wanted to manage small lock-up Drug Stores; £3 week and small commission; must be honest and energetic, understand Photography and Window-dressing. P.C.B. 26/400, Office of this Paper.

LEEDES.—Capable Assistant; Counter, Window-dresser and Dispenser; must have had good experience and able to be left in charge; permanent position, and opportunity will be given to learn Optics. 232/3, Office of this Paper.

LICEESTERSHIRE.—Smart Unqualified Assistant required with first-class Counter and Window-dressing experience; must be a keen and tactful Salesman. Give full particulars, etc. 147/216, Office of this Paper.

LICEESTERSHIRE.—Applications are desired for the post of Manager for a good-class city business; opportunity here for a man who is keen and up-to-date, and the successful applicant will be given every assistance in making a real success of his business; no house attached. 147/215, Office of this Paper.

LLANDRINDON WELLS.—For the season; a Qualified Assistant; quick and accurate Dispenser, with good knowledge of Photography. Apply, stating full particulars of age, height, references and salary required (outdoors), to Bound, Chemist, Llandrindon Wells.

LONDON, N.—Active, reliable Assistant, male, 25 years. Please give full particulars in first letter, stating salary required. Applications not acknowledged in four days respectfully declined. 229/23, Office of this Paper.

LONDON, E.2.—Immediately, Qualified Lady or Gentleman: Counter and N.H.I.; daily 9-8.15, Thursday to 1, Saturday to 2; no Sunday duty; easy berth; permanency. Give full particulars of age, experience and salary required to 230/16, Office of this Paper.

LONDON, N.W.3.—Manager required (qualified) for a good Family and Dispensing business; good all-round man, aged about 35 to 40. Please give details of experience, when at liberty, etc., to 147/204, Office of this Paper.

LONDON, S.W.—Qualified Manager (30-35) required for a good-class business (no house), consisting mainly of Counter trade. Give full particulars. 147/214, Office of this Paper.

LONDON, S.E.—Young qualified Assistant required for Light Retail and Dispensing. Applicants must be tall and of good address, well up in Photography and good Window-dressers. Apply, stating age, experience and salary, to "G.R.," 32 Deronda Road, S.E.24.

LONDON, E.—Elderly, qualified Assistant required for N.H.I. Dispensing; hours 10.30 a.m.-1 p.m., 5 p.m.-8 p.m. Apply, stating salary required, to 232/27, Office of this Paper.

LONDON, W.—Smart qualified Assistant Manager required for high-class West-End Dispensing and Retail business; must have had good homeopathic experience. Apply, stating age, height, etc., also when available. P.C.B. 26/7, Office of this Paper.

LONDON, E.—Qualified Assistant, immediate, used to N.H.I. Apply personally to 49 Harford Street, Mile End, E.1.

NEAR Sheffield.—Qualified Manager required; good Window-dresser, keen Salesman. Apply, with full particulars of previous experience, references, age, etc., to Ref. BBM, Taylors Drug Co., Ltd., Burley Hill, Leeds.

OXFORD.—Qualified Lady Assistant required immediately; must be experienced in Dispensing and Retail; reasonable hours. Please state experience and salary required; permanency if suitable. Clayton, Chemist, Cowley Road, Oxford.

SOUTH COAST.—Junior, with good experience, required to assist in a business on the South Coast; must have had experience on the Toilet and Photograph side and be an experienced Counterman. Please state age, experience, etc., to 147/213, Office of this Paper.

SOUTH COAST.—Qualified Junior wanted immediately. Send full particulars, age, salary required, etc., to 233/24, Office of this Paper.

A CAPABLE Qualified Manager required for a busy business in market town, Cambridgeshire. Applicants must have a thorough knowledge of the agricultural side of the business and be smart business men. State age, salary required, previous experience and when at liberty. 147/211, Office of this Paper.

A THOROUGHLY competent qualified man, to take charge of the Dispensing in a good-class business; also a Junior or Improver. W. Pickard, 80 North End Road, W.14, opposite West Kensington Station.

A SSISTANT, unqualified, male required; good Window-dresser and Dispenser, with knowledge of Photographic. State age, height, experience and salary required. Applications not answered in four days respectfully declined. H. J. Bromhall, Chemist, 10 King Street, Thetford.

A SSISTANT, under 30, with good knowledge of Photographic, Retail, Salesmanship and Window-dressing; knowledge of Optics and Sight Testing would be an advantage; good prospects for suitable man; London, S.W., district. State age, height, experience, and salary required. 233/13, Office of this Paper.

BOOTS THE CHEMISTS have several vacancies in London and suburbs for unqualified lady Assistants who have been apprenticed and thoroughly trained in the Retail; must be competent Dispensers. Apply, in writing, Boots Pure Drug Co., Ltd., Station Street, Nottingham.

FIRST-CLASS Manager required for business in the West End; must be smart and up-to-date and have had experience in high-class trade; no house to offer. This position must be filled by a man of exceptional ability, with "go-ahead" ideas and unimpeachable character. All details, please. 147/217, Office of this Paper.

I MEDIATELY.—Competent, unqualified Assistant; sound knowledge of Agricultural business essential; Photography and all-round salesmanship; references. Apply Hotter, Chemist, Holbeach, Lincs.

JUNIOR Assistants (20-25) required immediately for Drug and Photo Counter sales. Apply with references, age, height, snap, salary, experience; outdoors; full time; permanent; progressive. The Prosser Roberts Co., Pharmaceutical Chemists, 1, 3 Church Street, Camberwell.

JUNIOR required in North-West London; preference given to one who is a good Dispenser and is used to a quick Counter trade. State particulars of experience, age and salary required. 147/206, Office of this Paper.

JUNIOR Assistant required immediately; good address; accustomed to Counter; knowledge of Photographic sales essential. Please state age, experience, salary required. Windle & Co., Ltd., Chemists, Station Road, Swanage.

L ADY Assistants required in large firm of Retail Chemists; must be experienced in all departments. Full particulars, with salary desired. 147/209, Office of this Paper.

L EWIS & BURROWS have vacancies for qualified and unqualified Assistants, also for temporary Assistants for holiday relief work in London; would suit gentlemen returning to college in the autumn. Apply Lewis & Burrows, 146 Holborn Bars.

L OCUM, qualified, wanted, North London, between mid-June and mid-July, for 15 days, preferably commencing Friday; easy job. State wage and references. 233/4, Office of this Paper.

P ART-TIME qualified Assistant required for London Central; hours 8 p.m. to 11 p.m. Reply, with particulars of experience and salary expected, P.C.B. 25/32, Office of this Paper.

P ERMANENCY.—Unqualified Assistant, lady or gent., for high-class Dispensing business. Apply, giving particulars of age, height, experience (at least five years), and salary required (indoors) to B. Salter & Son, 34 Castle Street, Shrewsbury.

Q UALIFIED lady Assistant required for good-class pharmacy; Dispensing, Counter and Window-dressing experience. State particulars, with salary required, to "Chemist," 218 Heathfield Road, Birmingham.

Q UALIFIED Relief Manager required for the summer months; duties will extend to the end of September; this position offers good scope for a young man recently qualified, who is desirous of gaining extensive experience in all classes of the trade. Please state when at liberty, and all particulars regarding age, salary required, etc., to 147/212, Office of this Paper.

Q UALIFIED Assistant required immediately as Superintendent, to help with N.H.I. and Counter; lady or gentleman; would suit elderly man. Particulars to F. Gardiner, Ltd., 22 Bell Hill Road, St. George, Bristol.

Q UALIFIED assistance required, principally Dispensing, from July 8 to August 2 inclusive; no evening duty on Thursday and no duty on Sunday. Write terms to "E. S.," 200 Mount Pleasant Road, Tottenham, N.17.

Q UALIFIED Lady (Minor) Assistant for Dispensing and Counter; hours, 9 till 6 p.m. Full particulars of previous experience, etc. Mitchell, 6-8 Lewisham Road, Lewisham.

Q UALIFIED Superintendent (lady or gentleman); live in; comfortable home; progressive salary; easy berth; abstainer; permanent; used to Photo preferred; can purchase. "Rhei," 132 Lea Brook Road, Ocker Hill, Tipton, Staffs.

Q UALIFIED Senior Assistant, for Dispensing and Counter; under 30; outdoors; immediately; quick cash business; good all-round experience essential. Apply in first instance by letter giving full particulars and salary required, to Milner, 203 Trafalgar Road, Greenwich.

Q UALIFIED man shortly for branch; single-handed; good Counterman and accurate Dispenser; a permanency for energetic man. Please state full particulars, with photo if possible. Lester, Chemist, St. Dunstan's, Canterbury.

Q UALIFIED male Assistant for middle-class business; quick and reliable Dispenser, not over 30 years. Qualified lady (Minor), quick and reliable Dispenser, not under 24 years of age. State age, experience, references, salary required, if possible, enclose photo; both outdoor; to Savage, Chemist, Brighton.

Q UALIFIED, capable Manager, age 35 or over, with good all-round experience in Photographic, Dispensing, and must be a good Prescriber, etc.; total abstainer, with excellent references. Henderson's, Ltd., Trimdon Colliery, Co. Durham.

Q UALIFIED Assistant required within next week or two (lady or gentleman); quick Retail trade; within easy reach of London; permanency to suitable person. Write, giving full particulars, to 233/6, Office of this Paper.

Q UALIFIED Manager for branch. State full particulars, age, experience, references and salary; good prospects for right man; two rooms above shop to be let as Dentist; busy thoroughfare; prominent position. Write firstly "Chemist," 19 St. Mark's Road, London, E.8.

R EQUIRED, immediately, M.P.S. to take charge of Dispensing Department. Apply to Beckerman, Cash Chemists, Ltd., 234 Jubilee Street, Mile End, London, E.1.

S MART qualified man, young, good Salesman and Window-dresser, well up in Toilet and Photography, for seaside town on South Coast; salary £4; permanency. Please give full particulars in first letter. 232/36, Office of this Paper.

S TOCKTAKERS wanted at once by large firm of Retail Chemists; applicants must have had good experience and be prepared to move about the country. Please give all details regarding experience, etc., in first letter. 147/210, Office of this Paper.

T WO qualified Locums required for fortnight, July 7-21. Apply R. W. Hiam, c/o Smith, Gard & Co., Ltd., 240 Bennetts Castle Lane, Chadwell Heath.

U NQUALIFIED male Junior Assistant required, mainly for Counter work, with knowledge of Photo sales. References, salary required and photo to Atkins & Son, Pharmacists, Salisbury.

W ANTED, lady Assistant, qualified, with Retail experience for new lines. State salary and experience and when at liberty. 229/22, Office of this Paper.

W ANTED, a qualified, competent, energetic male Assistant, with Counter and Window-dressing experience. Apply, giving references, age, and salary required, W. H. Jennings, 40 Market Street, Hoylake, Wirral, Cheshire.

W ANTED, a good all-round qualified man to take charge of Chemist's Business situated in Middlesex, with house attached; this is a nice middle-class Family business, with Dispensing; preference given to applicants who have had experience in such a business. Please give all particulars in first letter. 147/208, Office of this Paper.

WANTED. qualified Assistant for branch; abstainer. State full particulars, age, height, experience, salary and references. Letters not replied to within 7 days respectfully declined. H. G. Owen, Chemist, Abergavenny.

WANTED, fully qualified Retail Chemist to take entire charge and manage small branch, S.E. London; salary £4 10s. week and commission. 232/9, Office of this Paper.

WANTED immediately, keen young Qualified Manager; good salary and prospects. State full particulars and date at liberty in first letter; enclose photo. V. Latty, Ltd., Temple Gate, Bristol.

WANTED, Unqualified Assistant; Counter, Dispensing, Window-dressing, Photography. Apply, stating particulars salary required and references, Geo. Wilson, 403 Poulton Road, Wallasey.

YOUNG, unqualified Assistant (male) wanted for good-class business; must have Counter and Photographic experience and be an accurate Dispenser. Apply, by letter in first instance, Black, 19 Electric Parade, South Woodford, E.13.

YOUNG lady required to take charge of Surgical Stock Room; one with experience in Retail preferred. Apply Lewis & Burrows, 146 Holborn Bars.

YOUNG man, about 19-21 years, wanted for the Counter trade of Chemical Apparatus; hours 9-6 o'clock, Saturdays 1 o'clock. Write, stating experience and salary required, to P.C.B. 25/28, Office of this Paper.

YOUNG Qualified Man required to run Branch in working class district, North London; must be good Window-dresser and capable of doing heavy N.H.I.; only those with undeniable references need apply. Commence May 6. Write BM/FPTK, London, W.C.1.

WHOLESALE.

ABLE Representatives required, Midlands, Northumberland, and Durham; excellent connections essential; commission 10% to 20% and part expenses after trial period; some experience Chemists' Rubber preferred. 147/203, Office of this Paper.

DOCK and Sample Clerk required; knowledge of Chemical trade. Write, stating age, experience, and salary required, to 146/195, Office of this Paper.

FIRST-CLASS Representative required to travel the whole of Scotland for old-established London Toilet Soap and Perfumery House; car provided; applicants must be resident in Scotland and not over 30 years of age. Applications will be treated in strict confidence, and should state fullest particulars of experience, etc., and addressed to 147/202, Office of this Paper.

PROGRESSIVE and well-known Manufacturing House, with old-established connection, require the services of a Representative, preferably young, for Notts, Lincoln, Norfolk, Suffolk, Northants, Beds., Cambridge and part Yorkshire. Applicants must be in a position to provide their own car, and should give full particulars of their past experience, age, and state whether they have any connection on the territory named. 146/185, Office of this Paper.

PROGRESSIVE position offered to London Traveller in Toilet Preparations, who has long experience and connection amongst Hairdressers; prospect of future Partnership or even immediate one with very little capital. Apply by letter, stating experience, wages, credentials, 229/26, Office of this Paper.

REPRESENTATIVE wanted for Hairdressers' and Toilet Specialists for London district; must have established connection; salary and commission. Give full details of experience. 146/195, Office of this Paper.

REPRESENTATIVE wanted for London district for one of the oldest brands of Eau de Cologne; on the market over 100 years. One having first-class connection with Wholesalers and Retailers should apply to 147/223, Office of this Paper.

REPRESENTATIVES for Scotland and West of England wanted by exclusive Perfumery House; must have sound connection amongst Chemists, Hairdressers and Drapers; own car an advantage; references essential. 229/27, Office of this Paper.

SCOTLAND. Perfumery and Toilet House require part services of established Representative, already working the territory by ear. 146/200, Office of this Paper.

TRAVELLERS, calling on Chemists and Druggists in London and suburbs and also Stores in the provinces, wanted to sell a Patented Rubberless Surgical Stocking as an additional line; good commission only; samples easily carried. Write, indicating ground covered, to 230/25, Office of this Paper.

WANTED, men with established selling connection, calling on Perfumery buyers, to carry a unique Patent Sifter Box on commission basis. Reply, giving full details of ground covered and present line carried. 146/194, Office of this Paper.

WANTED, by old-established Wholesale House, part-time Representative for Glasgow and district; connection established; good Proprietary and Packed Lines; commission basis. Apply 146/199, Office of this Paper.

WELL-KNOWN, old-established house urgently require full-time Traveller to take over their North Midlands territory, viz. Notts, Derby, Lincs, part Staffs, Northants and Cambs; only applicants of high standing with a practical knowledge of Toilet and Hairdressers' requirements considered; an active and valuable connection handed over to a really first-class representative, to whom a permanency and good terms will be offered; own car an advantage. Full particulars of all qualifications should be submitted in first letter. 147/222, Office of this Paper.

(COLONIAL, INDIAN AND FOREIGN.)

BRITISH DOMINION.—Wholesale. Counter Hand wanted by an old-established house in a British (oversea) Dominion; climate healthy and conditions comfortable; must be unmarried and not over 25; passage paid out; 3 years' agreement; salary progressive, commencing £22 per month. Apply, by letter only, "B. P." 146/201, Office of this Paper.

GERMANY.—Large German firm of Manufacturing Chemists has a vacancy at their head office in Germany on the scientific staff for a Medical Writer and Correspondent; must be able to write good English fluently and know sufficient German for translation of scientific matter into English; some knowledge of medical subjects desirable. State age, experience, salary, etc. 146/196, Office of this Paper.

SITUATIONS WANTED.

RETAIL. [HOME.]

A.A.A.—CHEMIST, experienced all branches, diplomaed Optician, F.S.M.C., F.I.O., J.C.Q.O.; send wire, expressed letters; disengaged May 6. "Chemist," 12 Teuby Road, Ponders End, Middlesex.

A.A.A.—UNQUALIFIED Assistant, 26, desires post in high-class Pharmacy; West-End or Central London only; 8 years' all-round experience, London and provinces. "Speedy," 232/11, Office of this Paper.

A.A.A.—ASSISTANT, unqualified, age 23 years, good all-round London experience, good appearance and address, desires engagement, Locum or permanency; London or South Coast. A. Vieyra, 50 Clements Road, Southwark Park, S.E.16.

A.A.A.—CHEMIST, Manager, getting married, excellent references, desires permanency in good-class pharmacy; sole control; not in London. Please state offer and when required. 233/9, Office of this Paper.

A.A.—A CAPABLE and experienced qualified Manager or Managing Assistant, aged 30, requires situation, London or provinces, with or without living accommodation; excellent references; disengaged shortly. "Scot," 19 Earlham Grove, Forest Gate, E.7.

A.A.—ASSISTANT; tall; 23; experienced Dispenser, Skinner, 22 Trenholme Road, S.E.20.

A CAPABLE Lady Assistant and Dispenser (Hall); disengaged; first-class experience; suit Doctors, Hospital or Chemists; Locum or permanency. 232/17, Office of this Paper.

A NEWLY-QUALIFIED Man, age 22, height 5 ft. 9 in., used to best-class pharmacy, seeks his first berth as qualified; excellent references. Eccles, 113 Malvern Road, N.W.6.

A S experienced; manager; Senior, Locum or General Assistant; Drug Stores or live business. "G.", 130 Scott-Ellis Gardens, N.W.8.

A POTHECARIES' Dispenser-Book-keeper; free April 27; South Coast resort for season; excellent references. Miss Hadfield, 58 Woodholme Road, Sheffield.

A QUALIFIED Manager, 28, desires progressive post; London preferred; 12 years' experience; free one month; excellent references. "H.", 152 Shakespeare Crescent, Manor Park, E.12.

A S Manager; qualified; 29; 6 years of qualified experience, up to date, with sound knowledge in all branches of Pharmacy. Davies, 76 Warwick Avenue, W.9.

A SSISTANT (referred Pharmacognosy) requires position, temporary for summer months, or with view to permanency, management, or Partnership when qualified; free May 25; Manchester experience. Breckon, "Sandhurst," High Street, Chard, Somerset.

A SSISTANT (Part I), 21, desires position in London; good Dispensing, Counter and Photographic experience. Apply Withers, 3 Old Market Place, Sudbury, Suffolk.

A SSISTANT; 23; 6 years' experience in high-class Dublin Pharmacy; Irish qualification; London experience required; highest references. 146/198, Office of this Paper.

A SSISTANT 24, unqualified, disengaged, desires post; London, W. or N.W., preferred, 8 years' high-class Dispensing and Photographic experience; good Window-dresser. P.C.B. 26/6, Office of this Paper.

A SSISTANT or Locum; experienced; Dispensing, Counter, Windows, Prescribing, Photography; energetic; trustworthy; competent; unregistered. "H.", 11 Trigon Road, S.W.8.

A SSISTANT, 5 ft. 11 in., 25 years' experience (owing to being slightly lame through accident), requires position as Book-keeper-Cashier; thoroughly experienced; could assist Dispensing and other duties when required; town or country; excellent references. Lee, 33 Lodge Road, West Croydon.

A SSISTANT; unqualified; Locum or permanent; can manage; all-round experience; disengaged 29th inst. "Radix," 72 Tremadoc Road, Clapham, S.W.4.

A SSISTANT; 23; passed Part I; first-class experience (London and provinces) in Dispensing and Counter work; good references; disengaged. Welsh, 17 Horncastle Road, Boston, Lincs.

A SSISTANT, 5 years' good experience, referred Pharm. Chem., requires situation. "Chemist," 66 Merches Gardeus, Cardiff.

A SSISTANT, 22 (referred Part II), requires situation for 3 months. London; South-West preferred; good experience. Dunn, Temple Street, Sidmouth.

ASSISTANT; 26; 9 years' experience, covering West-End and suburbs, Varsity City and provinces; keen Salesman, accurate Dispenser, original Window-dresser; disengaged. Williams, 61 Cambridge Terrace, London, W.2.

ATTENTION—Young Qualified Man requires situation, permanency or Locum; Bradford or near preferred. Write 235/20, Office of this Paper.

GENERAL work; good fees; educated Chemist, with sound, practical knowledge, desires permanent or part-time position in good-class Prescribing business, London or provinces; excellent references from Doctor and Pharmacist; disengaged. Young, 4 Eastgate Row, Chester.

BIRMINGHAM DISTRICT.—Capable Assistant; unregistered; used to management (or Locum); middle-aged; smart Salesman; good Window-dresser; Photographic; all-round experience; moderate salary; worker; N.H.I. "J. C.," 29 Gravelley Lane, Erdington, Birmingham.

BRIGHTON HOVE.—Experienced Pharmacist desires permanency, Manager-Superintendent; moderate salary; has dates open as accepted local locum tenens; recommended by R.P.U., B.D.H., E.L.W. S. Humphreys, M.P.S., 20 Norman Road, Hove.

CHEMIST, young, energetic, desires post as Locum, or permanency; fully experienced in all branches. 126 Goldhurst Terrace, N.W.6.

CHEMIST; 29; manager 5 years, London, Manchester; season's engagement; anywhere; Lancs. Coast preferred; Photography, Counter, Windows; good worker; references; free one month; interview. "G. B.," 10 Brockenhurst Street, Burnley.

CITY (London) post required by young unqualified Assistant; well recommended; sound experience. Anderson, c/o Salt Bros., Chemists, Buxton.

COMPETENT Assistant; unqualified; disengaged; Dispensing, N.H.I., Counter, etc.; mid-age; good recent references. "V.," 3 Rectory Square, Stepney, E.1.

COMPETENT, unqualified Assistant, 25, disengaged, 8 years' good-class experience, desires position, London, W. or S.W.; well recommended. Write "Tempus Fugit," 699 Fulham Road, Fulham, S.W.6.

DISENGAGED.—Competent, all-round Assistant; active; obliging; middle-aged; unqualified; successful manager; permanency or Locum. "Chemist," 91 Duncombe Road, Holloway, N.19.

DISENGAGED May 15th, Assistant, unqualified, 28; all-round experience; Brighton or district preferred. Russell, 59 Barnett Road, Brighton.

DISENGAGED; 32; qualified; experienced; references; Manager or Assistant. Griffiths, Werfa, Heulan, Cards.

EVENING post, West-End, desired by Assistant; 24; excellent experience, Dispensing and Counter; after 7 o'clock. 226/15, Office of this Paper.

GENTLEMANLY, unqualified Assistant, middle-aged, requires a permanent situation; can be well recommended; thoroughly conversant with all departments of the trade. "Accurate," 215/12, Office of this Paper.

GIRL, 20, requires post as Assistant; Liverpool preferred; good Counter-hand; used to quick trade; references. 230/35, Office of this Paper.

HIGHLY experienced, qualified Chemist requires Locums or permanency as Manager from July 8; highest credentials; London or Scotland preferred. 229/21, Office of this Paper.

HOSPITAL trained Assistant (21), referred pharmacy, desires position; prepared to accept moderate salary to gain high-class Retail experience. Write Mayo, 238 Linden Road, Gloucester.

JUNIOR Assistant, unqualified, Part I, 4 years' experience, requires season's engagement; Lancashire preferred. Yates, 257 Pall Mall, Chorley.

LADY Dispenser, aged 20, qualified (Hall), desires post with Doctor, Chemist or Institution; excellent reference. Miss Molyneux, 54 Higher Drive, Purley, Surrey.

LADY, 21, 4 years' apprenticeship, 1 year Assistant, thoroughly trained in all branches of Dispensing and Family business, desires post in London. 230/15, Office of this Paper.

LADY Assistant; 28; Drugs, Toilet, Photography; 12 years' (London) experience; disengaged. "M. J. H.," 35 Miranda Road, Highgate, N.19.

LADY Assistant; 20; 5 ft. 6 in.; Part I and Kodak course; Counter, Photographic, Dispensing. Cathro, Frodsham, Cheshire.

LADY Assistant (Hall) for good-class Pharmacy; excellent Dispensing and general experience; South preferred. 234/7, Office of this Paper.

LEICESTER or District.—Young Qualified requires position as Assistant or Branch Manager, locum or permanency. 235/18, Office of this Paper.

LOCUM; 22; high-class and West-End experience; London district; free. 229/31, Office of this Paper.

LOCUM; qualified; age 23; vacant dates, May-August; reasonable terms; anywhere. W. L. B., "Rocklea," Old Lane, Eccleston Park, Prescott, Lancs.

LOCUM (referred Pharmacy); 22; free until end of June; Yorkshire or Lancashire preferred; open for immediate engagement. 230/30, Office of this Paper.

LOCUM, M.P.S., disengaged until May 8; vacant dates, May 27 to June 1, June 10 to 15, July 29 to August 3, and from September 16 onwards; excellent references. Uriah Wood, 159 Front Street, Arnold, Nottingham.

LOCUM (Midlands).—B. S. Jones, M.P.S., is booking dates; open for immediate engagement; experienced in all branches. 34 The Oval, Stafford.

LOCUM, experienced in all branches; qualified; active; excellent references; terms moderate. "S. C. I.," 54 Priory Road, West Hampstead, N.W.6. Phone: Hampstead 8212.

LOCUM; qualified; well recommended; vacant dates, April 29 to May 20, May 27 to June 9, September 9 to 21. J. Frost, 6 Paragon, Blackheath. Phone: Lee Green 2967.

LOCUM; qualified; excellent references; booking April, May, July 8th to 26th. Wood, 33 Union Road, West Croydon, Surrey.

LOCUM, qualified, reliable, free May 20th to June 15th, August 26th to September 7th. "Pharmacist," 57 Brown Road, Walthamstow, Essex.

LOCUM; qualified; tall; 45; all-round experience; London preferred. "Cautious," c/o Thompson, Chemist, 314 Sangley Road, Catford, S.E.

LOCUM or Manager; permanency desired; free May 4th; thoroughly experienced and reliable. "Pharmacist," 2 Neeld Crescent, Hendon, N.W.4.

LOCUM; qualified; excellent references; varied experience; open for immediate engagement; booking dates for holidays; reasonable terms. Carr Side, Garstang, Lancs.

MANAGER, qualified, 42, married, 10 years' present post, desires position after Whitson; first-class credentials. Bell, 5 Mayfield Road, Gosforth, Newcastle.

MANAGER; qualified; 28; married; first-class London and country experience, 6 years as manager; disengaged May 18. "Pharmacist," 59 Stanley Avenue, Mottspur Park, New Malden, Surrey.

MANAGER; qualified; £4 10s. weekly; efficient and reliable; excellent references. Thomas, Chemist, Killinghall, Harrogate.

MANCHESTER.—Junior unqualified Assistant requires situation; 5 years' all-round experience; tall, energetic, reliable. Green, 57 Tenerife Street, Broughton.

PHARMACIST, 25, disengaged, desires post (permanent), in Midlands (Birmingham district preferred); two years' Midlands experience. "Pharmacist," c/o 36 Linwood Road, Handsworth, Birmingham.

PHARMACIST, young and energetic, desires position with a view to succession or partnership; experienced in all branches; capital available. Write "Chemist," 96 Edinburgh Road, Liverpool.

PHARMACIST, with double Optical qualification, registered J.C.O.O., seeks position; disengaged June 1; own equipment. "F.B.O.A.," 233/40, Office of this Paper.

QUALIFIED desires situation; season or permanency; with or without Optics; young and energetic; Photographic, etc.; free June 10. G. W. Taylor, 40 Duncombe Street, Sheffield.

QUALIFIED, 22, requires permanent position in first-class Pharmacy; disengaged; 8 years' experience; excellent references. L. Harper, 3 Bridlington Avenue, Southampton.

QUALIFIED, 23, desires progressive post; London and provincial experience; Lancashire coast preferred; disengaged. Mossop, Tilberthwaite Avenue, Coniston, Lancs.

QUALIFIED, 34, married, desires change; high-class Dispensing and Counter experience; Photography; Liverpool, Southport districts preferred; permanency; accommodation if possible; free month's notice, unless arranged. 230/26, Office of this Paper.

QUALIFIED.—Manager or Assistant, 29, 6 ft., West-End Counter and Dispensing experience, desires position in London; City preferred; excellent references. "Chemist," "Eastlands," Court Lane, Dulwich.

QUALIFIED Locum, disengaged, except August; over twenty years' experience, mostly West-End; competent, reliable. "Pharmacist," 81 Camden Road, N.W.1.

QUALIFIED Chemist, 22, requires situation in high-class pharmacy; good-class Dispensing and Counter experience; excellent references. Weeks, 115 High Street, Newport, Isle of Wight.

QUALIFIED, experienced Manager; Locum or permanent; excellent references. "Chemist," Flat 2, 6 Colville Mansions, Powis Terrace, Bayswater, W.

QUALIFIED; single; all-round experience; Locum or permanency; references good. "H. S.," 34 Cambridge Gardens, Hastings.

QUALIFIED Man, of exceptionally varied experience, seeks genuine Managership, with living accommodation preferred but not essential; highest West End, Continental, suburban and provincial references; usual notices. 232/30, Office of this Paper.

QUALIFIED Chemist; age 22; tall; capable; excellent Dispenser; all-round experience; first-class references; Locum or permanency; disengaged. 233/8, Office of this Paper.

QUALIFIED (26) desires post as Manager; ten years' good all-round experience in London and provinces. 234/11, Office of this Paper.

QUALIFIED Pharmacist, 35, engaged 10 years in Bacteriological work abroad, wishes to resume pharmacy, seeks position as Manager of small shop; very moderate salary; highest testimonials from doctors and hospitals. "C. B. B.," 4 Kimberley Villas, Crownhill, Plymouth.

UNQUALIFIED; good experience, Dispensing, Counter and Photographic work; holiday relief or permanency; disengaged; London only. "R.," 39 Lavender Gardens, Clapham Junction, S.W.11.

UNQUALIFIED; 30; willing; S.E. England preferred; free May 6. "Silver Badge," 251/10, Office of this Paper.

UNQUALIFIED Assistant, male, 24 (passed Part I), requires temporary post until September; accurate Dispenser; good at Window-dressing and Photographic (including enlarging, etc.); some experience in Optics; Leeds district preferred. 147/21, Office of this Paper.

UNQUALIFIED, 9 years' experience in London and Provinces, desires post in London. Fowler, 5 Broadway, Totland Bay, I.W.

MANUFACTURING FACILITIES

London firm with Modern Factory can undertake

Manufacture, Packing, and Despatch of Foodstuffs, Emulsions, etc.

Apply 146/180, Office of this Paper.

WHOLESALE.

COUNTER-HAND (female), experienced Wets, Drys, Extracts, Ointments, Ampoule Filling, Toilet Preparations, charge of Poison Room, etc.; excellent references; disengaged. "A. M.," 59 Rowsell Street, E.14.

EXPERIENCED Representative, capable, keen Salesman, successful propagandist, desires appointment with good house; Drugs, Sundries or Proprietaries; South Coast, Western Counties, or Midlands. 224/40, Office of this Paper.

EXPERIENCED Representative, young, capable, keen salesman, good appearance, requires position with progressive house, Drugs, Proprietaries or Perfumery; sound connection; South Coast, London, Yorkshire, Lancashire; strongly recommended. 230/38, Office of this Paper.

EXPERIENCED Assistant, unqualified, desires post; Who's sale ten years; excellent references; not afraid of work. 235/7, Office of this Paper.

IS there a real progressive firm open to consider the addition of a qualified Chemist to their staff, either indoor or outdoor? Here is a smart man, thoroughly versed in all branches of Pharmacy, who understands his work apart from knowing it. This is a chance to obtain a man of unqualified experience and ability, willing to give 100% efficient and conscientious services to the right people. Apply "Never Again," 231/1, Office of this Paper.

LADY Typist seeks temporary or permanent employment; thorough knowledge of Home and Export Invoicing and Costing; 12 years' experience in the trade. "E. S.," 4 Venetia Road, N.4.

QUALIFIED, male, single, 24, seeks position as Representative, propaganda, position of trust; keen; energetic; smart appearance; requisite personality; home or abroad; can drive car; free; interview desired; resident London. Write 231/4, Office of this Paper.

REPRESENTATIVE; disengaged shortly; long experience; London and provinces; Specialist Medical Propaganda; salary and expenses; own car; good appearance, personality. P.C.B. 21/4, Office of this Paper.

TRAVELLER, disengaged, requires post; keen Salesman and hard worker; sound connection Eastern Counties, Chemists, Hairdressers, Toilets, packed goods. 232/29, Office of this Paper.

(COLONIAL, INDIAN AND FOREIGN.)

ANY PART OF THE WORLD.

QUALIFIED, 39, good appearance and salesman-ship, adaptable, 15 years' Retail experience abroad, is prepared to go to any part of the world in any capacity; has now been in own business in England one year and wishes to go abroad again; some knowledge French and Dutch; is prepared to learn any language in a short time; offers are invited. Write 147/219, Office of this Paper.

FOR SALE.

COLTON B2 Tablet Machine, make up to 8-in. tablets, perfect running order, cost £45, cheap at £25, or nearest offer. State nearest railway goods station when replying to "Compresso," 234/17, Office of this Paper. Also Stokes' Wet Granulator slight repair required.

FOR Sale, 20,000 73-grain Tablets of Acetyl-Salicylic Acid (P.B.), also 20,000 73-grain Phenacetin; no reasonable offer refused. 69 Stanton Road, Burton-on-Trent.

FINE solid Mahogany Fancy Drug Fitting with bevelled plate mirrors, 18 ft. length and 9 ft. height, eight cupboards in top and nine bottom sections; best London make; in excellent new condition; this can be fitted in three sections; surplus from alterations. What offer? Genuine bargain to cash buyer; personal inspection invited. Robinson, Chemist, 308 Cleethorpe Road, Grimsby.

MAHOGANY Dispensing Screen, perfect; Deal Screen, with bevelled mirror and 5 cases; 12 ft. Drug Range, comprising 60 drawers, self-contained, glass sunk labels and knobs, 6 cupboards beneath; 6 ft. bent glass Service Counter Case; 6 ft. plate-glass Counter with shelves (Stephens, Edinburgh); sketches sent. Tolbooth, Chemist, Canongate, Edinburgh.

CLEAR OUT—your Old or Damaged Stock of Photo Goods.

Why keep them any longer? Turn them into CASH.

I GIVE BEST PRICES for Old Films (damaged, fogged or expired dates); Packet Papers. Cards (any sizes). Old Photo Goods or Cameras. Bromide Papers. Plates (all sizes, all makes). Send any goods in the photo line. I buy all, good or bad. Cash per return. A good price for all Cameras. Send them along. **S. E. HACKETT, 23 July Road, Liverpool**

PAPAVERINE PURE AND HYDROCHLOR

We desire to purchase immediately, for own use, large and small quantities. Write, with details as to size of lots, to **R. M. 183 c/o RUDOLF MOSSE, Berlin S.W.100, Germany**

MISCELLANEOUS.

CHEMISTS' FITTINGS.—Silent Salesman Cases, Drugfittings, Wallcases, Dispensing Screens, glass-front Counters, Perfume Cases, Window Enclosures, Glass Shelves, Mirrors, Counter Drawers. Before you decide send to **GEORGE COOK**, the well-known Chemists' Fitter, 27 Macclesfield Street, City Road, London, E.C.1.

FOR SALE at 50 per cent. below market prices: 35 lb. Acetate of Copper, 10½ cwt. Fluorsilicate of Soda, 3 cwt. Crude Acoridine, ½ cwt. Cyanide Potassium, 1 carboy Acetic Acid, 1 cwt. Winter Green, 4 cwt. Barium Carbonate, 184 gallons Methylphenetone. Apply **MELROSE, 8 Norborough Road, Doncaster**.

LIMITED COMPANIES REGISTERED.—I have now been engaged in this work over 20 years, so you may rely that my experience in Chemist and other Companies (I take all trades) is hard to beat. Most reasonable and inclusive fee. Advice free. **A. B. SLACK, 35 Christ Church Avenue, West Didsbury, Manchester.**

QUALITY SHOP FITTINGS.—12 ft. Pharmacy Fitting, 10 ft. glass cased Front Counter, 6 ft. Dispensing Screen, 6 ft. Wall Case, 6 ft. bent plate-glass Counter Case, Counter Drawers, Perfume Case and Desk, all mahogany, £100; splendid value. **PHILIP JOSEPHS & SONS, LTD., 90/92 St. John Street, Clerkenwell, London, E.C.1.** "Pharmacy Fitters for over a Century."

SECOND-HAND CHEMISTS' FITTINGS.—We have an exceptionally fine selection of these in all sizes; prices are right, and goods are in first-class condition; we shall be pleased to supply particulars and prices. Call or write, **RUDDUCK & CO., 219 Old Street, London, E.C.1.**

£87 15s.—SET OF MAHOGANY FITTINGS.—10 ft. Drug cupboards and lockers; 10 ft. glass-fronted Counter, nest of 13 drawers at back; 6 ft. Wallcase, 6 ft. Dispensing Screen, Perfume Case and Desk. Illustrations on request. **E. BERG, LTD., 335 Old Street, London, E.C.1.**

£95 FOR A COMPLETE SET of Pharmacy Fittings, ready for immediate use, 10 ft. mahogany Drug Fitting with showcase, drawers, cupboards, shelving, etc.; 6 ft. Wall Case in two heights; 6 ft. Dispensing Screen with showcases and bevelled mirror in centre; 10 ft. mahogany Serving Counter with cases in front; two nests of Counter Drawers; plate-glass Counter Case, Perfume Showcase and Desk, Check Till. **PERCY R. E. JOSEPHS, 68 Old Street, 1/5 Tilney Court, London, E.C.1.** Phone: Clerkenwell 0929.

EXCHANGE COLUMN.

FOR DISPOSAL.

WHAT OFFERS?—"National Dispensary," 5th edition, 1894; "Coolup Cnucy. Practical Receipts," 2 vols., 1892; "B.P.C." 1911; "Gray's Supplement," edited by T. Redwood, Ph.D., 1857; all in good order. 229/16, Office of this Paper.

WANTED.

CHEMICAL BALANCE, suitable for assaying drugs, etc. Quote lowest price to 232/14, Office of this Paper.

THREE DEVELOPING TANKS, one Drying Cupboard, Enlarging Camera. "Chemist," 340 Harrow Road, London, W.9.

GOWER, Chemists' Bookseller; 41 Voltaire Road, Clapham, wants Pharmaceutical Books, including Pharmaceutical Formulas, B.P.C., P.J.F., Optical Books.

MAHOGANY SHOP FITTINGS, second-hand: Wall Case, length about 12 ft., height about 7 ft. 6 in., depth 7 in. to 12 in., about; Counter, about 9 ft. long, glass cases in front, drawers at back. State lowest prices to **BM/OFK5**.

WEYMOUTH.—Would any Chemist exchange Private House for 3 weeks, August or September, with another in Winchester, or recommend small house for rent to accommodate 3 adults and 4 children. "Holidays," 74 Hatherley Road, Winchester.

TRADE



MARK

WRIGHT'S DISINFECTING FLUID

NOW IS THE TIME TO GET YOUR STOCKS.

*The sales are rapidly increasing year by year
through merit and value for money.*



It should be recommended for use
in :—

DUSTBINS	DRAINS
LAVATORIES	CESSPOOLS
URINALS	STABLES
KENNELS	CAGES, etc.

In handsome decorated tins :—

$\frac{1}{2}$ pint	(Retail 10 $\frac{1}{2}$ d.)	...	7/-	per dozen.
1 "	(" 1/4)	...	10/6	" "
2 "	(" 2/3)	...	15/-	" "
$\frac{1}{2}$ gall.	(" 3/6)	...	24/-	" "
1 "	(" 5/9)	...	45/-	" "

A gallon tin yields 40 gallons
of active disinfectant at a cost
to the user of 1 $\frac{3}{4}$ d. per gallon.

SHOW MATERIAL AND LEAFLETS FREE.

WRIGHT LAYMAN & UMMINEY

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Your
customers
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DUBARRY'S
Silkashave



Retail 1s. 3d. Refill 10d.

-the **NEW** shaving
sensation

THE patented Container is made entirely of glass—no metal to corrode.

In use the Shaving Stick is not withdrawn from the Tube. The Container acts as a holder, so protecting all but the exposed end of the Stick from the softening action of water.

THE Stick has a new and distinctive feature, rendering it entirely different from any other Shaving Soap, in that it produces an indescribable cooling and comforting sensation. It yields a creamy, abundant, non-drying lather.

